AUDIO MEDIA
Professional Audio in Production

No. 288 • December 2014 www.audiomedia.com NewBay Media

Our top product releases of 2014 p18

IN THIS ISSUE

Neve

500 SERIES

Neve - No Question

www.ams-neve.com

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NewBay Media

This year has been another busy one in the pro-audio world, with product launches, manufacturer news, and tradeshows aplenty. We take a look back over the happenings in our main feature this month – our annual Gear of the Year round-up. Once again we've asked the guys who get hands-on with this kit – our contributors and reviewers – to highlight the gear that has made their lives easier and perhaps even a little more fun in 2014. The round up begins on page 18. Let us know whet you think of our choices on social media using the hashtag *#AMGearoftheYear*.

Looking ahead to next year, we have big plans for *Audio Media*. In this space next month there'll be a new face – familiar to many of you – as we extend the team and look to enhance our reporting of the latest technology and trends in the pro-audio market.

The rest of the magazine will look a bit different too – with more reviews, how-tos, in-depth features, and viewpoints from those who use this gear on a day-to-day basis. Visit www.audiomediainternational.com and you'll experience a much-improved online experience and you'll be hearing from us on a more regular basis as our newsletters become daily. See page 10 for more on what this enhanced offering will mean and how you can keep in touch with the new team.

In fact, the changes have already begun with Matt Fellows joining us as staff writer. Matt has a strong interest in pro-audio tech, loves getting hands-on with gear, and is an avid writer. We're sure he'll fit right in.

"Looking ahead to next year, we have big plans for Audio Media. In this space next month there'll be a new face – familiar to many of you – as we extend the team and look to enhance our reporting of the latest technology and trends in the pro-audio market."

The team will be at NAMM next month, followed by ISE in February, so do drop me a line if you'd like to arrange a meeting.

As well as taking a trip to the Music Production Expo in north London, Matt's first month also included a visit to Point1Post in Elstree where the team were mixing Showcase Cinemas' XPlus trailer in Dolby Atmos, and working on a Turkish film, which might not be what first comes to mind when you think of Atmos films. Read more from this trip on page 12.

Elsewhere in this issue we go behind the scenes of *Masterchef: The Professionals* to discover there are still challenges, even on such a long-running series. Kevin Hilton takes a trip to Manchester and finds that it isn't all about MediaCityUK – The Sharp Project is doing a great job of nurturing talent too, with 80 Hertz just one facility benefitting (p24).

We also get our hands on Flare Audio's R1 headphones. Since their launch at PLASA the *Audio Media* team has been keen to give these a thorough testing – read what we discovered on page 32. ■

Joanne Ruddock, Managing Editor
@audiomediamag

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RAI Amsterdam

Conference 10-14 September : Exhibition 11-15 September

IBC 2015

IBC2015 Innovation Awards Open for Submission

Has your company accomplished a groundbreaking achievement or implemented an advance in technology in the last year? If so, then IBC want to hear about it. The IBC2015 Innovation Awards are open and we invite you to submit your entries now.

The IBC Innovation Awards are unique because they go to the end user that has taken the best of today's technology to create an innovative solution to a real creative, technical or commercial challenge.

These Awards encapsulate everything that is positive about electronic media and entertainment, highlighting collaboration and celebrating those who push the boundaries between technical partners.

We are looking for exceptional applications in three categories – most innovative projects in:

- **Content Creation**
- **Content Management**
- **Content Delivery**

Last year's IBC Award winners include:
FIFA TV, Wiener Staatsoper, Sky Sports, Sky News Arabia, Turner Sports

To find out more information about the IBC Innovation Awards and how to submit your entry visit www.ibc.org/awardsentry

www.ibc.org/awards

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t. +44 (0) 20 7832 4100 **f.** +44 (0) 20 7832 4130 **e.** info@ibc.org

Wireless Personal Monitoring for QU Series

Allen & Heath has added wireless personal mixing to its Qu Series mixer ecosystem in the form of the new Qu-You app. Qu-You allows up to seven performers to control their monitor mixes using an iPhone, iPad or iPod Touch, and frees up the engineer to focus on the audience.

Senior product manager at Allen & Heath, Nicola Beretta, explained: "With Qu we're building a complete ecosystem of mixers, stage boxes, recording tools, apps, and more, whatever the engineer and artists need for mixing live or in the studio. Qu-You is designed to be super easy to use in the heat of the moment, so performers can get up and running with it almost instantly. All the functions they need are literally at their fingertips, and unlike some apps out there, all functions are available in either orientation, so you won't see guitarists fumbling to turn their phone and play a solo at the same time!"

Qu-You has a 'Four Wheel Drive' view, presenting chunky thumbwheel level controls for four groups of sources, plus a master mute and output level control. Double tapping on a group gives access to individual channel metering, send levels, and stereo pan. Groups can be named for instant recognition and channels can be assigned to groups via simple checkboxes, allowing the user to create their perfect custom mix.

Qu-You is available now from the Apple App Store and is compatible with the Qu-16, Qu-24, and Qu-32.

www.allen-heath.com

Arturia to Release Audio Interface in 2015

Music software and hardware developer Arturia has announced it will be stepping into a new market sector when unveiling its next-generation audio interface in 2015.

Arturia president Frédéric Brun made the announcement during his keynote speech at the Museum of Grenoble as part of the company's 15th anniversary celebrations in October. Here he touched upon what he saw as several problems pertaining to portable audio interfaces that modern-day musicians work with, from workflow, to compatibility, and even audio quality. Arturia says it has taken significant steps to solve these issues once and for all.

Brun was not unaware, however, of the risks of entering an already crowded market sector. During the keynote, he admitted that a distributor had warned him not to go there, stating that there are already "...too many competitors – large companies with history in the field". But that hadn't deterred him: "Yes, that's true. But at Arturia we are stubborn, and we think we can do something different. We think we can bring something new to market."

www.arturia.com

Roland Unveils M-5000 Live Mixing Console

Roland has introduced its next-generation live-sound digital mixing console, the M-5000. The console features a new operating platform that delivers 128 freely definable audio paths, a flexible user interface, expandable protocols, and multiple-format I/O choices. All paths are delivered at 24-bit/96kHz quality and can be used as a mixing channel, AUX, matrix, subgroup bus or MIX-MINUS bus in any input/output configuration. This allows the operator to 'build' a console to suit the application.

Network options are said to be versatile, with two REAC ports in addition to two expansion card slots to support a range of system configurations and audio transport protocols, such as Dante, MADI, and Waves SoundGrid. The back panel includes 16 x 16 analogue I/Os, 4 x 4 AES/EBUs, a 16 x 16 USB audio interface, connection for control via an iPad and control ports including footswitches, GP I/O, RS-232C and MIDI. This enables the console to see up to 300 inputs and 296 outputs, all at 96kHz. Inputs can even be patched to outputs independently of mixing channel resources.

Workflow is entirely user assignable, with a 12in colour touchscreen, 28 channel faders in four groups, multifunction knobs and buttons, and 'selected knob' functions. The built-in GUI is also expandable via Mac and Windows software to any portable device.

Roland's existing products integrate with the new platform, including the R-1000 48-channel player/recorder and M-48 personal mixer; connecting the latter via the powered REAC port allows mixing between aux busses and personal mixers.

www.roland.co.uk

SSL Announces AAX Versions of Duende Native Plug-ins

Solid State Logic has released AAX (Avid Audio eXtension) Native 64 versions of the SSL Duende Native plug-in collection. These versions ensure compatibility of SSL's Duende Native plug-ins with any 32-bit or 64-bit system running Pro Tools/Pro Tools HD 11 software. The continued compatibility with VST, AU, and RTAS systems means that SSL plug-ins are available to almost all DAW users.

The Duende Native plug-in collection has grown to 10 processing tools, including the EQ & Dynamics Channel plug-in, which provides an EQ and dynamics processing solution with the signature tone of an SSL 9K and later SSL console channel strip. The Stereo Bus Compressor plug-in, meanwhile, provides the classic SSL stereo master bus compressor that brings power and punch to a mix without compromising clarity.

The new versions are available to download now from the SSL website and are free to all existing owners.

www.solidstatelogic.com

CEDAR studio 6

Academy Award winning AAX & VST
noise suppression for workstations and consoles

Mac

www.cedaraudio.com

Yamaha Launches RIVAGE PM10

Yamaha has followed up its PM1D and PM5D mixers with the RIVAGE PM10. The unit features the RY16-ML-SILK hybrid microphone preamplifier with an analogue section that promises consistent, natural-sounding audio, even at high gain levels. It is partnered with a 96kHz, 24-bit A/D converter, followed by enhanced Yamaha VCM digital modelling of Rupert Neve Designs transformer circuitry and Silk processing.

Operated via a user interface with a full Selected Channel section, 24 of the control surface's channel strips extend into the twin 15in touchscreen displays, while rotary encoders feature 'horseshoe' ring indicators for optimum visibility. A third display screen can be added via a DVI socket, if required.

Other features include enhanced Scene functions, dual monitor busses, the ability to run up to 384 effects processors at once and four USB connections for data storage, mouse/keyboard control and two track USB recording.

The backbone of the RIVAGE PM10 system is the TWINLANe ring network, which can handle up to 400 audio channels at 96kHz, 32-bit over distances of up to 300m. TWINLANe can connect up to eight RPio622 I/O units and, at launch, up to two CS-R10 control surfaces and up to two DSP-R10 DSP engines.

The RPio622 features six of Yamaha's new RY card slots, compatible with three different types of I/O card, providing up to 96 mic preamps per rack. The RPio622 and DSP-R10 feature HY card slots (two and four respectively) for further I/O, while all three hardware components feature two MY card slots. An optional HY-Dante card can be used to integrate multitrack recording or other hardware, including other Yamaha digital consoles.

With the CS-R10 control surface featuring 8 x 8 local analogue I/O and 8 x 8 AES3 I/O with sample rate conversion, a fully-expanded RIVAGE PM10 system can accommodate over 3,000 I/O.

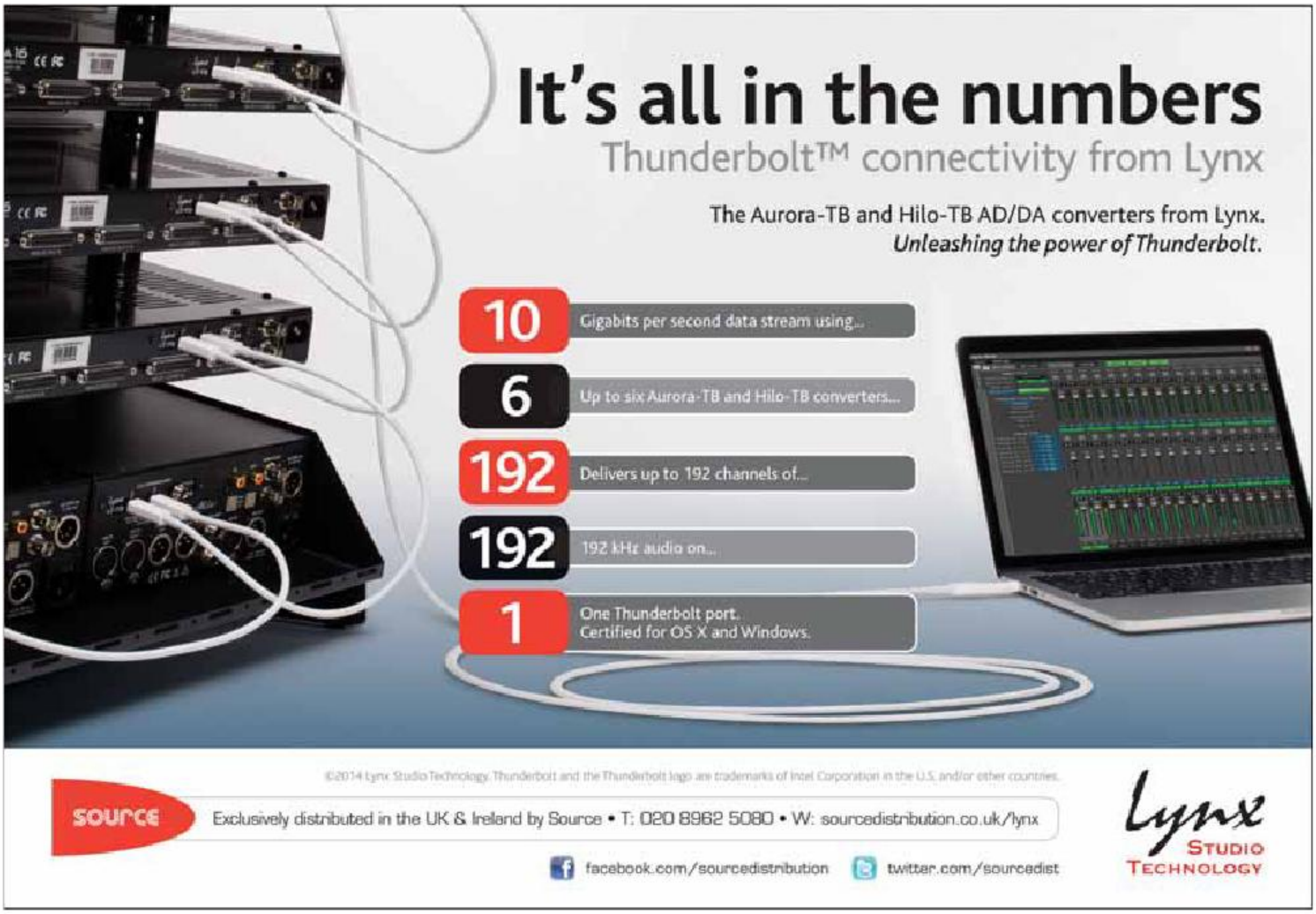
www.yamahaproaudio.com

MOTU Expands AVB-equipped Audio Interface Line-up

MOTU is now shipping the 24Ai and 24Ao interfaces. Both offer 24 channels of analogue audio input (24Ai) or output (24Ao) in a single rack space, combined with three banks of ADAT optical for a total of 72 channels of I/O, all supplied on standard DB-25 D-sub connectors or 12-pin Phoenix connectors. Also equipped with DSP-driven mixing/effects and AVB Ethernet, users can mix and match complementary I/O configurations and unify operation on their shared AVB audio networking platform.

Jim Cooper, director of marketing at MOTU explained: "They're incredibly flexible. You can use them as an audio interface, optical expander, or network extension for a MOTU AVB system, complete with internal mixing, routing and effects, plus wireless control over all settings."

www.motu.com


It's all in the numbers
Thunderbolt™ connectivity from Lynx
The Aurora-TB and Hilo-TB AD/DA converters from Lynx.
Unleashing the power of Thunderbolt.
10
Gigabits per second data stream using...
6
Up to six Aurora-TB and Hilo-TB converters...
192
Delivers up to 192 channels of...
192
192 kHz audio on...
1
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DR-70D New From Tascam

The DR-70D digital recorder from Tascam offers four balanced XLR mic inputs to meet the requirements of production sound, from professional users to indie DSLR shooters.

The compact format can be mounted either above or below a camera, and a pair of built-in microphones can capture sound on set. The interface is designed for quick adjustment, with additional features to keep recording levels under control. Tracks on the DR-70D are captured to SD card, SDHC or SDXC media – up to 128GB cards are supported. The recorder has tripod mounts on the top and bottom of the unit, allowing it to be mounted on a camera, a follow-focus cage, or used standalone.

Other production-friendly features include a slate tone, low-noise buttons, a powerful headphone output, and standard AA battery power.

www.tascam.com

QSC Adds to Amp Range with GXD Series

QSC has announced the addition of the GXD 4 and GXD 8 processing amplifiers to its entertainment and production applications line.

Housed in a 2U rack-mount configuration, GXD Series amplifiers feature Class-D power devices for high power output in a lightweight chassis design. The models are said to offer complete loudspeaker processing capability, enabling users to optimise their loudspeaker systems. DSP processing includes High and Low-Pass filters (24dB LR), four-band parametric equalizer, signal alignment delay, and RMS/Peak speaker protection limiting. Twenty preset 'starting points' are provided, and a digital limiter prevents destructive clipping which can damage loudspeaker components while still delivering the maximum usable output. Smart loudspeaker protection is set by selecting the loudspeaker's continuous power and impedance (4 ohms and 8 ohms), and either a Mild, Medium, or Aggressive protection mode as desired.

Additionally, GXD Series front panels include a power switch, four status indicators, and a large LCD screen that provides metering and status monitoring.

Both new models will be available in January 2015.

www.qsc.com

The **all new Lyra 1 & 2** USB interfaces offer acclaimed **Prism Sound** quality at the most affordable price ever. Based on the highly regarded Orpheus FireWire interface Lyra 1 & 2 offer a **truly professional** audio standard in smaller formats. A choice of 4 inputs and 6 outputs (Lyra 1) or 12 inputs and 16 outputs (Lyra 2) are available with high grade microphone preamps, sample rate conversion and bit rate truncation tools with **world-class** noise shaping options, assignable volume control, comprehensive routing and mixing capabilities and more Lyra 1 & 2 provide a **complete soundcard solution** for recording, mixing and mastering in a small format when your quality **simply cannot be compromised**.

"Nothing else compares, I will never give up my Prism Sound interfaces."

Dwayne "Supa Dupa" Chin-Quee
Producer, DJ and ASCAP member: Eminem, Beanie Sigel, Mary J Blige, John Legend, Drake...

PrismSound

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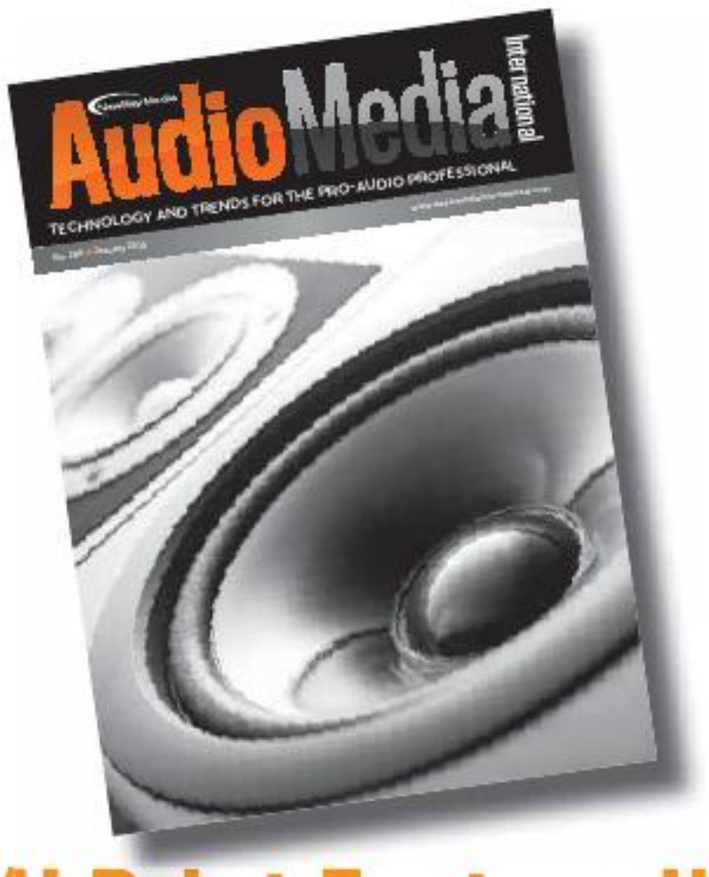
Changes Ahead for Audio Media

Title to merge with Audio Pro International and expand in 2015 with a fresh look, enhanced online presence, and new team.

AudioMedia International

TECHNOLOGY AND TRENDS FOR THE PRO-AUDIO PROFESSIONAL



As part of a substantial programme of investment across print, online, and events *Audio Media* magazine will undergo a comprehensive redesign, launching in January 2015.

Au*dio Media* is combining its 25-year print heritage with the online strength of *Audio Pro International (API)* to create *Audio Media International (AMI)*. The first issue of *AMI* will hit desks in the new year, accompanied by a daily newsletter and new website – www.audiomediainternational.com.

While continuing to cover the core recording, post-production, and broadcast markets traditionally handled by *Audio Media*, *AMI* will also serve the live and commercial install sectors.

Audio Media International will deliver a wide variety of in-depth industry content, including product news and reviews, a 'how-to' section, real-world end-user case studies, show coverage, technology focuses, and features in a highly accessible format.

In addition, key figures from across the industry will offer their thought leadership on important issues in a new Opinion section.

API editor Adam Savage, who is taking on the editor role for *AMI*, said: "Having been editor of *Audio Pro International* for the past two years, I truly believe that joining forces with *Audio Media* allows us to create an exciting new publication that will become an essential resource for audio professionals in all areas of the business.

"It may be a new title, but with *Audio Pro International*'s global online influence, particularly in the live and install sectors, and *Audio Media*'s excellent reputation in recording, post and broadcast, I am very confident that we can deliver a service that the industry has been waiting for."

Joanne Ruddock, managing editor of *AM* and *API*, added: "Both *Audio Media* and *Audio Pro International* are well-respected titles in their fields. By combining the online strength of *API* with *Audio Media*'s print focus we are creating a brand that fulfills the needs of the entire market.

"We believe the information needs of the pro-audio technical community are best served via a single, specialist, long-standing brand. The new-look, redesigned *Audio Media International* will continue to fulfill our readers' information needs, both now and in the future."

As well as a print magazine, *Audio Media International* will offer a new, custom-built, responsive website that is easily navigated across a range of devices from desktop monitors and smartphones to iPad, Android and Tablets.

The site will be updated with new content daily, with the latest news delivered to your inbox every morning via the *Audio Media International* Daily newsletter, based on the successful *API* Daily.

By combining the two titles, the reach of *AMI* will be extensive, both across the various pro-audio market sectors and geographically. The daily newsletter will go out to more than 30,000 readers globally, while the print circulation is set to increase from 5,000 to 7,500.

Audio Media International will also continue to produce the highly regarded Buyer's Guide series of print supplements, with Microphones, Theatre Sound, Monitors and Headphones, and Live Consoles all up for detailed analysis in 2015.

As always, these Buyer's Guides will feature product information, market overviews, contact directories, and more.

The new *Audio Media International* team will be at The NAMM Show in January, followed by ISE in February. To arrange a meeting at either of these events email jruddock@nbmedia.com.

To find out more about the changes to *Audio Media* and how you can get involved with the new-look publication, contact commercial director Darrell Carter on dcarter@nbmedia.com. ■

AMI Print Feature list

January
- Installed Sound
- **Tech Focus:** Live Power Amps
- **Shows** ISE, NAMM

February
- In-Ear Monitoring
- **Tech Focus:** Loudness Audio Metering
- **Show** BVE

March
- Touring Sound
- **Tech Focus:** Studio Mics

April
- Broadcast Production
- **Tech Focus:** Headphones
- **Shows** Prolight + Sound, NAB, PLASA North
- Microphones Buyer's Guide

May
- Immersive Sound
- **Tech Focus:** Studio Consoles
- **Shows** AES Europe

June
- Festival Sound
- **Tech Focus:** Cables And Snakes
- **Shows** Infocomm, ABTT
- Theatre Sound Buyer's Guide

July/ August
- Game Audio
- **Tech Focus:** DAWs
- **Show** Develop

September
- Vintage Gear
- **Tech Focus:** Digital Consoles
- Live Consoles Buyer's Guide

October
- Theatre Tech
- **Tech Focus:** Speaker Management
- Monitors and Headphones Buyer's Guide

November
- Networking
- **Tech Focus:** Small-format PA

December
- Gear of the Year
- **Tech Focus:** Personal Monitoring

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POST PRODUCTION

TSL Recreates the Antarctic

While working on *Antarctica: On The Edge*, the first ever 3D movie filmed in Antarctica, director Jon Bowermaster opted to shoot the entire movie without sound due to the potential problems created by the harsh weather and mechanical noises. Instead he turned to New York-based Creative Audio Post to recreate realistic sounds during the post-production phase.

"Starting a movie about life in Antarctica for IMAX 3D and other large screen theatres without any sound-of-tape was a daunting task that many would have just covered up with a heavy and overwhelming musical score. My goal was to balance the beautifully scored orchestral track with a completely organic, natural, and upfront surrounding sound," explained Jacques Boulanger, Creative Audio Post's founder.

During the two and a half years from the initial concept to the post-production phase, sound designer Boulanger used every opportunity to record sound that could be used in post to recreate realistic sounds for the frozen continent. To do so, he and his partner Holly Grace acquired a Soundfield ST450 microphone from TSL Products, together with a dead-cat wind stopper, a multichannel portable recorder, and a battery pack.

From recording his footsteps in knee-deep snow, to breaking ice while kayaking frozen sections of the Hudson River in New York state and capturing howling winds on top of Gunks Ridge in the Shawangunk Mountains, Boulanger used the TSL Soundfield ST450 to acquire realistic, three-dimensional sounds that could be used in a variety of surround mixing environments, from stereo to 5.1, 7.1, and beyond.

"The TSL SoundField ST450 coincidental mic diaphragm architecture provides not only a limitless combination of polar patterns and surround formats, but most importantly, gives the mixer the confidence that its use will always remain phase coherent, no matter how the delivery may be folded down to: 3.0, stereo, mono, etc," explained Boulanger.

"The Soundfield mic enabled me to create material with a convincing and overwhelming texture and dimension that makes the soundtrack completely natural and convincing, and immediately transports you to Antarctica through the magic of the 3D full surround experience."

When it came to the final mix, Boulanger and his team used the output of the Soundfield by folding out the B-format into 5.1 using the SurroundZone2 plug-in. The plug-in unlocks the information captured by the microphone, providing high levels of control over a wide range of parameters from a single user interface. Boulanger and his team were able to tweak the polar pattern, focus point, and orientation, dynamically matching sound to the picture as if it was the sound-on-tape but with hyper surround imaging.

"I love my TSL Soundfield Mic and it is always packed and ready to go at the drop of a hat," he concluded.

www.tslproducts.com

STUDIO

Heard Around Town

Sarm Studios has been in the news as the venue for the recording of Band Aid 30's *Do They Know It's Christmas*. Other recent projects include Billy Idol's new album *Kings And Queens Of The Underground*, which was produced by studio owner Trevor Horn. Also, The Prodigy have been working at Sarm with producer Neil McLellan.

Design consultancy **Recording Architecture** has closed, but visit www.ra-thebook.com where *RA: The Book* is on special offer until 1 January 2015.

The **Miloco** group reports that it is now representing four studios in the US – **Eldorado** in Los Angeles, **The Bunker Studio** in New York, **Welcome to 1979** in Nashville, and **Studio Trilogy** in San Francisco.

The Script's *No Sound Without Silence* was produced by the band together with help from previous collaborator Andrew Frampton and producer/songwriter Jimbo Barry. eIt was partly recorded at **Sofa Sound**.

Recorded in **The Pool** studio and engineered by Miloco's Joseph Rodgers with additional production and mixing duties by Dan Grech, *Real Love* by Tom Odell, a cover of the classic John Lennon song, has been picked for this year's much publicised John Lewis Christmas ad.

UK producer, engineer, and mixing specialist Alan Moulder (Nine Inch Nails, The Killers, Arctic Monkeys, Foals) has bought a pair of PMC twotwo.8 monitors for his personal mix room, based at **Assault and Battery Studios** in north-west London.

Question de Son Studios in Paris has installed two pairs of custom Amadeus monitors.

Alexandre Desplat and Daniel Pemberton were honoured at the World Soundtrack Awards in Ghent in October, winning Best Film Composer of the Year and Discovery of the Year respectively. Desplat won for his scores to *Grand Budapest Hotel*, *Godzilla*, *The Monuments Men*, *Venus in Fur*, *Philomena*, *Zulu*, and *Marius*, several of which were recorded or mixed at **Abbey Road Studios**. The Discovery of the Year award celebrates emerging film composing talent, and was awarded to Pemberton in recognition of his scores for *Cuban Fury* and *The Counselor*, both recorded at Abbey Road.

STUDIO

Obituary: Werner Wahl

It is with great sadness that we report the passing of Werner Wahl, who was known to many in the recording industry during his employment at F W O Bauch from 1952 until he retired.

Mick Glossop writes: "Werner would regularly visit recording and mastering studios, repairing and upgrading Neumann, EMT, and Studer equipment. There are many fond memories and humorous anecdotes of a gentle man, who could be relied upon during a studio's most difficult time, when something was broken and the session delayed. Werner was one of a small unsung group of people who kept UK studios at the forefront of the industry."

Until recently, Werner was an active member of DEAF, the Distinguished Engineers' Audio Federation. There was expected to be a large turnout at his funeral which was scheduled to take place as *Audio Media* went to press.

POST PRODUCTION

Point1Post Mixes XPlus Trailer in Dolby Atmos

Point1Post has finalised the mix for the new Showcase Cinemas XPlus trailer in Dolby Atmos. XPlus is Showcase's proprietary large-format auditorium experience that combines Atmos sound with high-quality digital projection and screen technology to offer a more immersive experience.

BAFTA-nominated re-recording mixers Adam Daniel and Graham Daniel completed a number of mixes for the UK, US, and Brazilian markets. However, this is far from Point1's only experience of Atmos, with foreign-language films, theatrical presentations, and more in its back catalogue.

Graham Daniel is keen to point out that Atmos is not just for action movies: "We've just done a Turkish movie, *Mucize*, based in the mountains of east Turkey and it's wonderful. The sounds that have been created – people shouting in the mountains – you can hear it all the way around you. And all of the placement sound suddenly becomes a reality."

Burak Topalacki, who created all of the sound design and was a mixer on the trailer as well as acting as supervising sound editor and re-recording mixer on *Mucize*, added: "It's not only surround. Height is like this new dimension for us. [In *Mucize*] we have a pigeon flapping on front speakers and we could make it fly up from the floor to the ceiling and land back. It's great to feel the movement from up and down, left to right. It's not necessarily on the surrounds but on the front we have a new dimension, which is really exciting."

The popularity of cinema screenings of live productions is another area in which Atmos has proved itself. Point1Post recently worked on such a production of *The Crucible*. Graham explained: "It's quite important with things like the replication of the theatrical experience – say, ghosts in *The Crucible* and those sorts of productions – in that you're sitting there suddenly in the theatre with lots of people. They recorded it in the Old Vic and had lots of microphones in and around the room – neck mics for the people on the stage, boom mics as well, so they had something like 20-odd mics that they had as sources. So when they replicated the sound in this environment it was a cinematic experience, but also you felt as though you were sitting with the audience watching the play as you hear the audience moving around."

Adam added: "To me that was quite a new experience because it was the first time we'd done any live theatre and it sounded real – the dialogue levels, the energy and with the Atmos mix of it all it was a lot more lifelike and it worked."

The Dolby Atmos mixing stage at Point1 features a 45-speaker JBL system with four-way screen channels, and a 48-fader dual operator Avid Icon D Command running Pro Tools HDX2 and HDX3.

"The biggest plus as far as the surround sound is concerned is the two bass management speakers at the back of the room. These mean that when any sound moves away from the screen rather than being a band-limited small speaker sound it suddenly becomes a wide range sound," added Graham.

"There are 14 speakers in the ceiling and you can route audio to those as a stereo array," continued Adam. "We found quite successfully on *Mucize* that by putting a different atmosphere above, you suddenly realise you've been listening to the walls all your life and suddenly you're listening in to a much more natural envelope of atmosphere and it worked really well."

Looking to the future, the studio is keen to complete a full end-to-end Atmos mix. Adam said: "Most projects have become Atmos after the original production but now that Dolby have got their local renderer that means the guys in the cutting rooms can actually use the same tools to prepare

the tracklay and that makes the translation from the cutting room into the theatre a lot more seamless. It's been really well panned out. I think the way we look at the objects and things, if we were doing a project end to end we'd be quite happy to spend a similar amount of time pre mixing as mixing because essentially they've just swapped one panner for another and the whole experience has really been like a duck to water. We got taught the basics and then straight away we were pushing the boundaries."

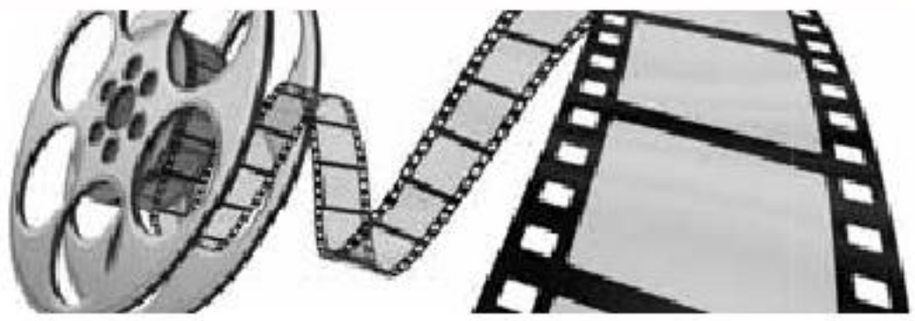
The addition of Atmos for the home has been another important development, that Adam believes can only be good for business: "I think it's really important that there is a domestic Dolby Atmos as I think it will encourage producers to think their investment in Atmos is going to be lifelong to the product rather than just at the cinema. At the moment it seems to be an additional cost and an additional cost is always questionable, especially for how long it's going to last but now it's on domestic it's going to last the lifetime of the project."

Graham concluded: "We can't help but think that Dolby Atmos will become the de facto standard. Almost everything that comes out of America now – certainly the big movies – and most movies over here are in Dolby Atmos."

www.dolby.com
www.point1post.co.uk

RECORDING

From the Cutting Room



Wildfire Studios and Sonic Magic have announced they will form the Wildfire Sonic Magic Group, creating an independent post-production facility in Los Angeles. Sonic Magic will continue to provide full-service while integrating its proven Avid ISIS networking technology and Avid Euphonix consoles alongside Wildfire's existing Harrison mixing stages. Theatrical Dolby Atmos installations and additional mixing facilities are coming in early 2015.

Over at **Jungle**, sound designers Jim Griffin and Chris Turner completed the audio work on short film *Mohammed*, a comedy drama written and directed by Mustapha Kseibati and produced by Michael Berliner. Graeme Elston also worked on the mix of the teaser trailer for the second series of *Psychobitches* for Sky Arts.

Margarita Mix of Santa Monica has installed a fourth Fairlight EVO integrated audio production system. With the upgrade, the facility's sound mixers are now working on identical audio post platforms in their HD mixing suites.

London post house **Sequence** has provided full end-to-end post for the documentary series *Liberty of London*, a behind-the-scenes look at London's iconic department store.

Warner Bros. De Lane Lea has added 24 Meyer Sound cinema loudspeakers to its primary mixing stage as part of a recent upgrade to Dolby Atmos. The newly outfitted Stage 1 is central London's largest stage and also its first to offer this format, offering a seven-metre screen, an 80-fader AMS Neve DFC Gemini digital mixing console, seven Pro Tools HDX systems for playback and recording and film, and 2K 3D digital projection.

Native has been busy with the new M&S Christmas advert, where they placed the classic Julie London version of *Fly Me to the Moon*.

Gearing up for NAMM

With only a month to go until one of the year's most exciting pro-audio events, we offer a brief rundown of what to see at the show.

NAMM returns for four days of sun and audio tech

The biggest names in pro-audio technology will be coming together for another gathering in the California sun from 22-25 January 2015 at the NAMM Show in Anaheim.

Taking place within the vast borders of the Anaheim Convention Center, the world's largest trade-only event for music products looks set to live up to that title and fill the shoes of previous shows; it promises all the latest technology developments and product exhibitions from over 1,500 manufacturers from 99 countries, plenty of educational events, seminars and keynotes for the audio production professional, and there's even a host of live music performances.

With so much going on it would be all too easy to miss the key features on offer throughout the event; fortunately, *Audio Media* has pulled together this brief guide to help you plan your trip.

Seminars

This year's H.O.T. (Hands-on Training) Zone, found on level 2 of the Convention Center, will host a wealth of discussions focused on pro-audio production, with informative how-tos covering hands-on techniques and talks on developing your industry acumen.

Kicking off on Thursday 22 January, the Master Class room is the place to be from 12:00pm to 3:00pm for mixing technique classes 'Recording for a great mix', and 'Mixing tips from the pros'. This is followed by an industry tech examination 'The music technology landscape'. At 5:00pm, 'Music and audio for the smaller screen' discusses the woeful transition of your perfectly tuned studio audio into unbalanced speaker setups and how to account for it in your mixing.

Sessions continue on Friday at 12:00pm in The Forum with 'iPad in the studio', which offers an insight into how Apple's device can enhance your pro-audio endeavours. 'Optimising your sound system upgrade' begins at 3:00pm in the Tech Lab with Wes Maebe discussing how to select the best value live/studio gear, and at 5:00pm in The Forum, David Scheirman presents 'Using effects effectively at FOH' – a discussion on how to capture live instruments successfully.

On Saturday, be sure not to miss a keynote address from president and CEO of Meyer Sound, John Meyer at 11am in The Forum, while 'Audio mastering: Essential practices' follows at midday, presenting a primer on mixing to accommodate a variety of formats. Closing the Saturday from 4pm in The Forum, the TEC Hall of Fame ceremony will recognise veterans and pioneers of the industry and celebrate their technical innovations and achievements.

Technology

Of course, the show is just as much about the tech as it is about the talking, and while most companies are keeping their big guns behind closed doors and remaining silent until the show opens, *Audio Media* can divulge a few details of what some companies will be presenting.

Audio-Technica has revealed it is set to unveil a couple of exciting new products that they are keeping confidential until the show. Besides new arrivals, the company has also confirmed that recent products such as the AT5045 cardioid condenser instrument microphone and AT8024 camera-mount microphone will be present. This is in addition to the System 10 camera-mount and stompbox systems, and the M-Series monitor headphone range.

Harman has confirmed that **JBL Professional** will be showing its new EON 206P portable PA system, an all-in-one powered system that promises 'legendary' sound for audiences of all sizes. The unit features a pair of 6.5in passive loudspeakers with 6.5in woofers and 1in nylon dome tweeters, powered by a 160W power amp section; weighing only 25 pounds, it is built to be flexible, portable, and durable.

Merging Technologies has promised an appearance from the Hapi Networked Audio Interface – a successor to Horus which boasts connectivity with any DAW; Horus itself may also appear in its own right. Both the Ovation media and show sequencer and Pyramix audio engine will be on the Merging stand, and the company has teased that it will reveal a brand new 3D panner in prototype form.

President and CEO of NAMM Joe Lamond comments: "This event is the crossroads of the global music industry and there is no better place to see all the exciting new products under one roof, meet and hear from industry leaders who are shaping the future for us all and at the same time attend some of the most enjoyable music and networking events of the whole year. We're looking forward to producing a fun and productive show for our members in January." ■

www.namm.org

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Aussie Rules

Adam Savage speaks to a number of companies that are really doing the business Down Under.

POPULATION: 23.6 MILLION

Photo Credit: Adam JWC

It might have a relatively small population for a country of such a vast size, but Australia has no shortage of talent in its creative industries, which makes for a pretty strong pro-audio market, too.

Despite their geographical isolation from the rest of the world, and therefore many of their main partners, a lot of Australian audio manufacturers, such as RØDE, are seeing high demand for their products at present.

"We may have a smaller industry than a lot of markets overseas but the quality of work being produced here in Australia is world class," says RØDE's Mathew Piccolotto. "We very much wear the Made in Australia logo on our products as a badge of pride, as it's become synonymous with quality the world over. Companies such as RØDE and Blackmagic are showing the industry what is possible here in Australia with investment into new technologies, so hopefully that is contagious and encourages more innovation across all markets."

As for the current state of the recording industry in Australia, Piccolotto comments: "From our perspective it seems incredibly healthy. More and more people are understanding the need for high-quality audio, and are investing in audio equipment not only in studio-based recording, but also in broadcast and film, which has been a huge area of growth for RØDE in recent years."

Danielle Engen, studio manager of Studios 301 in Sydney, is equally upbeat: "I've read that Australians buy 100 million recordings each year and in terms of music being made, we're releasing something like 15,000 tracks per year," she reports. "Australian artists also continue to make big waves overseas, so in terms of the overall music market we really are thriving, which means there is a great demand for recorded music and the services we offer as a studio.

"We're consuming music differently now and listening habits have changed drastically, so that impacts recording budgets and consumer demand, as well as how we're making music – from the processes through to the venues and facilities we're making it in."

Studios 301, which also has a facility in Byron Bay, is one of only a few high-end studios in Australia, but there is a lot of activity at the 'lower' end of the scale. "Due to the advent of more affordable equipment and digital workstations, for example, lots of smaller studios have opened their doors, which is actually a benefit to us," Engen explains. "They are helping the industry stay healthy and many of them utilise us for drum tracking, mixing and/or mastering."

Live

So what about the live sound arena? According to Graeme Whitehouse, general manager of Norwest Productions, which claims to be the region's largest audio service provider, businesses are faring fairly well, but many companies are now having to show their versatility more than ever. "It's tough, but it's active. Like any niche business, you need to be agile and consider diversification to get through the lean periods," reveals Whitehouse. "At times, touring seems to be a race to the bottom; we try to focus on a wider variety of revenue streams and it's going very well for us."

As in so many other parts of the world, the global financial crisis had a huge impact on the disposal income of the Australian people, which had a knock-on effect for the touring industry, but the worst of that is over, at least for the time being. "Australia is a tourist economy in many ways, so when the crisis hit, it took money out of people's 'good times' budget," continues Whitehouse. "It's recovered pretty well now, and the market has evolved. Expectations of a younger generation of corporate clients are higher. Concert-goers want more 'spectacle' for their buck."

Other than Norwest, there are probably three other major audio companies that are capable of servicing multi-stage international-spec festivals, or more than a couple of tours at a time. "They're good businesses at that end of the scale, all of them," says Whitehouse. "Below those few audio specialists there's a layer of mid-level companies that, although smaller, are still quite capable, and are well-stocked with great, modern gear."

So how does Whitehouse see the market changing in the future? "It's a hard call. Australia is attracting interest from international audio companies seeking to expand into the Asia-Pacific region, but there's still only so many bites in the pie," he states. "I think we'll see businesses that aren't adaptable start to fade away, and as clients demand higher production values across all the market sectors, the pressure will be on suppliers to either lift their deliverable service values or reduce pricing to maintain customer's interest." ■

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Mixing It Up

We speak to the audio team behind the latest series of MasterChef: The Professionals and find that there are still new challenges to this long-running programme.

The Molinare *Masterchef* team: (L-R) Tae-Hak Kim, Steve Speed, Tom Foster, and Nick Ashe

Competitive reality cooking show *MasterChef* first graced our screens nearly 15 years ago. Since being revived in a different format almost 10 years ago it is now formed of a number of strands, including the original amateur *MasterChef*, *Celebrity MasterChef*, *MasterChef: The Professionals*, and more recently *Junior MasterChef*. Soho-based film and post-production facility Molinare has provided full post-production services across all strands of the show from series two onwards.

Recently the Molinare team handled the post-production of series seven of *MasterChef: The Professionals*, which consists of 21 one-hour episodes, and as Steve Speed, dubbing mixer, explains, the series presented a unique set of challenges at both the tracklay and mixing stage.

"Each episode is shot using multiple cameras both in the studio and on location," he explains. "To add to the complexity, the final sound supplied from the offline edit has a significant number of edits.

"A great deal of work goes into the equalisation and restoration of the edit in order to produce a balanced and uninterrupted soundtrack for the viewer. We use a number of tools including iZotope RX and Altiverb to treat and bring those recordings up to broadcast standard."

"From a sound editor point of view, *MasterChef* is one of the most challenging television programmes out there," agrees tracklayer Tae-Hak Kim. "With 30 tracks to choose from in the latest series, we had to go through and select the best recordings that would make sense with the narrative of the show and enhance this with sound effects.

"For the latest series we used a variety of techniques and software in order to streamline the editing process that enables us to turn the show around as quickly as possible. The use of Pro Tools 10 throughout the audio process worked well alongside the plug-in iZotope RX. By using these tools we could make the frequently very noisy dialogues – due to the nature of professional kitchens – coherent above a very music-driven show."

The music of *MasterChef* is well known for its energetic and often bold style and extensive work undertaken on the dialogue sync recordings at the tracklay and mix stages allowed the team to give a full range to the music mix, creating a dynamic and emotive soundtrack.

In order to achieve such consistently high results, teamwork and planning were crucial.

"The producer's vision to create a professional yet energetic and fun show needed careful pre-planning," adds Tae-Hak Kim. "As a team we met at the beginning of the project to set out the vision before starting work and adopted a collaborative approach to the project, with constant communication throughout to check the different parts worked together to the best effect."

Masterchef firsts

Series seven of *MasterChef: The Professionals* was the first time the team had worked with EBU-R128, the new loud normalisation requirement.

"This enabled us to create a dynamic mix and offered us more flexibility to give the sound track real energy," explains dubbing mixer Nick Ashe. "This project had a four day turnaround, with two days preparing the audio and two days to mix and review each episode. This is a fair allocation and demonstrates how the producers value the audio on the series."

Returning to the issue of challenges faced on the series, Ashe adds: "Sean Pertwee, the narrator, was filming in New York. This meant that for the first time on any *MasterChef* series we had to record from his location to Molinare's studio. To do this we used Source-Connect, which allowed us to artistically direct him during the recording sessions.

"The *MasterChef: The Professionals* series has a different feel to the other strands of the *MasterChef* franchise, with a slightly more serious tone. As a team we worked together to create a style which reflected this slightly more grown-up theme through the audio, utilising different sound effects and with more of an emphasis on the sync recordings."

Masterchef: The Professionals is currently showing on BBC Two in the UK. ■

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The Seal of Approval

As the year draws to a close we take a look back over the past 12 months to award those products that caught our eye the prestigious Audio Media Gear of the Year 2014 seal.

Once again the *Audio Media* team has spent much of the year at trade shows, visiting studios, enjoying live productions, and talking to those who use these essential tools of the trade on a daily basis. Along with the continued support of our team of reviewers, who have got their hands on a huge range of gear, from plug-ins and DAWs to console and monitors, we've compiled a list of products that we think have stood out from the crowd, whether for functionality, features, originality, or value. Congratulations to all the winners and let us know what you think of our choices on Twitter using #AMGearoftheYear.

IN THE MIX

Neve Genesys Black

Even from a cursory glance, the Genesys Black is an impressive console, but it's more than just aesthetically and ergonomically appealing. The console boasts digital integration as a DAW controller and with on-board computer management, yet still offers that classic 'Neve sound'. The analogue circuitry is taken from some of Neve's classic gear but, like the original Genesys, a lot of the physical parameters are digitally controlled.

As Genesys designer Robin Porter told us: "We want the console to look appealing in a studio as clients like to see they are getting value for money, but we also spent a long time making sure buttons, level control faders, etc were in the correct position for good workflow."

See *Audio Media* October 2014 for a detailed review.

The bottom line:

"Everything about the Genesys Black makes perfect sense. I can't think of any stone that's been left unturned, offering so much in one product."

Simon Allen, sound engineer

Softube Console 1

Almost a year after it was first announced, Softube's next-generation hardware controller/mixer with integrated plug-ins finally became available. Designed to emulate an SSL single channel strip by providing both the physical knobs of an analogue console as well as its sound, all for your DAW, it offers the closest feel and sound to real analogue mixing with a DAW. Read the full review in *Audio Media* April.

The bottom line:

"I must admit to being surprised at how it sounded and felt like using a real SSL with a few nice added options. Good hands-on control, intuitive workflow and quality options for EQ, gate, compression, transient shaper, filters, and harmonics/distortion."

Alan Branch, Grammy Award-winning producer and engineer

Soundcraft Vi3000

With Spidercore DSP technology, FaderGlow, and four Vistonics II touchscreen interfaces with 3D graphics, the Vi3000 is packed full of features and benefits from a simple and clean design with all the standard Vi controls and terminology. Users can integrate into Dante audio networks and access DAWs for live multitrack recording and virtual soundchecking via MADI.

MIDI, USB, and Ethernet ports are also included, along with a DVI output and four channels of AES I/O. Uninterrupted performance is assured by dual redundant PSUs, while two ports on the Vi3000's rear panel open up a world of possibilities for I/O expansion and networking.

The bottom line:

"This is an extremely versatile console with a lot to offer straight out of one box. I think there are many customers who have been waiting for this product and possibly don't even realise it yet."

Simon Allen, sound engineer

Lawo mc²36

Launched with some fanfare at IBC 2014, the mc²36 is an all-in-one mixing console with a comprehensive feature set that is said to be suitable for broadcast, theatre, house of worship, live, and install applications. Despite its compact size, its powerful DSP micro-core with internal 512 x 512 port audio matrix, and integrated I/O, make it useful for both permanent installations with limited space and rental companies looking to optimise transportation. As it is natively equipped with Ravenna/AES67 technology, the mc²36 integrates into IP infrastructures. And for operational security, the console not only has redundant power supplies but also DSP redundancy.

The bottom line:

"We're yet to get out hands on this latest addition to the mc² family but the Lawo pedigree combined with enhanced functionality and ease-of-use makes us think this is one to watch in 2015."

Joanne Ruddock, Audio Media

LOUD & CLEAR

Dynaudio BM Compact mkIII

Today, small monitors abound, but the BM Compact mkIIIs have enough in the tank to elevate them above the crowd. Made in Denmark, with fit and finish commensurate with the label, they have a pedigree from one of the world's leading monitor manufacturers.

In audio performance terms, their clean but untiring neutrality make them monitors you can rely on, rather than speakers for casual listening. And they protect your investment – if space and money allow, add a BM 9s II subwoofer to expand the bottom end while retaining the existing virtues of the Compact IIIs.

The bottom line:

"If you are trying to mix with dynamic subtlety you need monitors that don't mask the depth of your mix while still maintaining the scale of your peaks. The Compact monitors pull this off in a very convincing way."

Alistair McGhee, freelance broadcast and live sound engineer

Genelec 8010s

Released at NAMM, the 8010s are the smallest models in the 8000 range. Designed for small studios and OB trucks, the 4.8in x 4.6in monitors weigh in at just 1.5kg, making lugging expensive heavy units around a thing of the past.

Despite their compact dimensions, the 8010s don't compromise on power. They are capable of pumping out 96dB and have a 25W 3in woofer and 25W 0.75in tweeter.

Read the full review in the May 2014 issue of *Audio Media.*

The bottom line:

"The sound coming out of the 8010s was… wrong. In the sense that speakers this small should not be pouring out a wave of music this rich and deep."

Jerry Ibbotsen, audio producer and writer

Allen & Heath Qu-32

Allen & Heath's Qu-32 desk follows fast on the heels of the Qu-16 and Qu-24 models, benefiting from a 1.5 firmware version that has already addressed most of the minor niggles in the operating system (such as the ability to name channels). With 33 fully automated faders it is one of the few digital consoles of any size that has a fader for every single input channel (with a preamp).

The bottom line:

"Allen & Heath has somehow managed to strike that difficult balance between including all the advanced features that professional engineers demand while also making it accessible for non-expert operators. Its intuitive and straightforward interface makes it a pleasure to use for all."

Andy Coules, live sound engineer

Audio-Technica ATH-M50x

The ATH-M50x provide great extended bass – not too strong of a top-end and mostly flat mids (except for a little 400Hz scoop) and 99dB efficiency/38 ohms.

They seemed to be voiced the same as the original with its 45mm drivers (the biggest in the line) but they add three removable cables (10ft straight, half-coiled, and the 4in straight, which is ideal for non-tangling personal use).

They're comfy, isolated, snug, durable, plenty loud and plenty deep.

The bottom line:

"Audio-Technica took an already good product line and made it better, with no drawbacks that I can see (or hear). The ATH-M50x remains my absolute favourite studio headphone at $169 street."

Rob Tavaglione, owner/proprietor, Cataylst Recording and a regular contributor to Pro Audio Review

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ON THE MOVE

Sony UWP-D series

Available in three packages, the Hybrid Digital Processing UWP-D wireless microphone series is designed to offer users the sound quality of digital audio processing combined with the reliability of analogue FM modulation. It has won plaudits for its wide frequency response – with a bandwidth of 72mHz available – as well as for being small and lightweight.

The bottom line:
"Designed with the production professional in mind, the UWP-D series is rugged, easy to use, and includes wireless and handheld mics, all of which can be easily mounted to cameras using a new design of the light shoe adaptor."
Joanne Ruddock, Audio Media

RØDE i-XY

The original RØDE i-XY, which launched in 2013, was the world's first microphone for iOS devices. Updated for 2014, the new version features a Lightning connector to support the iPhone 5, iPhone 5s, and iPhone 5c. It retains the same high-quality recording performance at sample rates up to 24-bit/96kHz, and features a matched pair of 0.25in condenser capsules arranged in a stacked X-Y configuration, with on-board high-fidelity analogue-to-digital conversion.
iXY works with any iOS audio app that accepts a digital stereo input, including RØDE's own offering, RØDE Rec. This features real-time waveforms, a suite of non-linear editing capabilities and powerful EQ and gain controls. There's also the RØDE Rec LE, a feature-limited free version of RØDE Rec.
The bottom line:
"This neat little stereo mic from RØDE has been on my wanted gear list for a while; with up to 24/96k and a perfect 90 alignment bootlegging your favourite band has never been so good or easy."
Alan Branch, Grammy Award-winning producer and engineer

READY TO RECORD

Sound Devices 970

Released at NAB, the 970 is Sound Devices' first audio-only rack-mountable recorder, boasting 64 channels of Dante and MADI. The half-rack, 2U device is designed to simplify applications requiring high-quality, high-track count audio recording, such as drama and reality production, and live concert recording.
The 970 records to any of four attached drives, two front-panel drive bays and two rear-panel e-SATA connected drives. With four available drives, material can be recorded to multiple drives for simultaneous backups, eliminating post-record copying.
The bottom line:
"The Sound Devices reputation in an audio-only package with the added advantage of Dante and a high track count. What's not to like?"
Joanne Ruddock, Audio Media

Warm Audio WA76 compressor

This modern reproduction of the Classic 1176 Revision D won plaudits for its affordability, as well as its well-constructed and neat layout. The simplicity of use of the original is recreated exactly in the WA76, and aficionados of the 1176 will be pleased to hear that the 'all ratio buttons in' and 'all buttons out' modes also work on the WA76. Read more in *Audio Media* July.
The bottom line:
"The WA76 definitely sounds like a real 1176 and the controls behave in the expected and predictable manner – I can't give it higher praise than that."
Stephen Bennett, musician, engineer, writer

CLEAN CAPTURING

RØDE M5 and NT1

The only company to get two nominations for Gear of the Year 2015, the updated NT1 and new M5s hold up RØDE's tradition of providing high quality in an affordable package. The M5s are a perfectly fine matched stereo pair of microphones that would make a decent addition to anyone's audio armoury, while the NT1 could easily be the best choice for certain vocalists. And, like the fabled SM57 before it, no one is going to be embarrassed when hearing the results in years to come.

Read our review and interview with new product development project manager Sun Kyung Sunwoo in the February issue of *Audio Media*.

The bottom line:
"These two microphones are now my go-to response when asked the question 'what's the best low-cost microphone you can recommend?'"

Stephen Bennett, musician, engineer, writer

DPA d:screet Omni Necklace

A simple but effective new concept from DPA – a well-proven 4061 capsule embedded in a necklace-style fitting, which is robust, discrete, and easy to fit. Designed initially with the reality TV market in mind, the mic also has a role to play in radio roundtables, corporate events, and houses of worship. Read the featured review plus our Q&A with product manager Mikkel Nymand in the November issue of *Audio Media*.

The bottom line:
"You are getting the highest quality personal mic in a simple-to-fit package. If I was getting booked for 12 weeks of reality TV with eight radios and no provision for staff 'on the floor' for the whole shoot, I would be ordering mine now."

Alistair McGhee, freelance broadcast and live sound engineer

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PLUGGED IN

Exponential Audio Surround Reverb

Michael Carnes redefines the bar and takes reverb plug-ins to a whole new level. Lush sound from the daddy of the Lexicon hardware with a clever interface design to allow both ease-of-use and complexity of control. Sheer reverberant sound genius with top class customer service to boot.

The bottom line:

"These reverbs, to my ears, demonstrate their designer's pedigree and are the best that I have ever heard."

Mike Aiton, owner, Mikerophonics Post

Waves Vitamin Sonic Enhancer

Vitamin Sonic Enhancer is a simple multi-band harmonic exciter with stereo width control. Using Vitamin, it's easy to tighten and enhance the bottom end while adding air to the top and shaping the midrange. Its uses are pretty much limitless on guitars, keys, drums or the entire mix. One of those plug-ins that once you've tried it it's hard to go back from.

The bottom line

"It's certainly one of the plug-ins hot right now. Alongside MeterPlugs Perception this has to be my plug-in of the year."

Alan Branch, Grammy award-winning producer and engineer

MeterPlugs Perception

MeterPlugs and mastering engineer Ian Shepherd teamed up to release the Perception plug-in, which removes the loudness deception by auto-level matching. It's the only tool that enables a mixer to hear true impartial differences when working with FX plug-ins or plug-in chains. If you want to learn how to compress or EQ your mix better and louder with a correct peak to loudness display then this could be for you. Read our full review in the next issue.

The bottom line:

"This has to be one of my top choices for *AM*'s Gear of the Year 2014 as it's so simple yet so undoubtedly unique."

Alan Branch, Grammy award-winning producer and engineer

Ones to Watch in 2015

As ever there wasn't enough time to get our hands on all the gear we wanted to this year. Here are some possible future Gear of the Year contenders that were released a bit too late to be considered for 2014.

Roland M-5000

This next-generation live sound digital mixing console is based on the new OHRCA (open, high-resolution, configurable architecture) operating platform. With a huge range of functionality, Dante, MADI, and REAC network options, and 128 freely definable audio paths all delivered at 24-bit/96kHz sound quality, the desk offers huge amounts of flexibility. Due for release in Q1 2015.

iZotope Ozone 6

The preview at AES sparked a burst of interest among the *Audio Media* team. Featuring a redesigned interface and a host of enhancements designed to make the mastering process faster and easier, Ozone 6 is also be able to function as a stand-alone application for the first time.

PMC QB1-A

Launched at AES in October (the unit's first sale was confirmed at the same show) PMC's large-scale reference monitor offers over 4,800W of power per channel and incorporates analogue and digital inputs, PMC's Advanced Transmission Line (ATL) bass-loading technology, DSP control, and the latest generation of PMC's Class-D amplification and driver designs.

Lab.gruppen PLM+

Building on the success of the 20000Q, the PLM+ offers twice the processing power, twice the throughput, and a whole host of additional features and improvements. Available in two models – PLM20K44 and PLM12K44 – the units are targeted at the touring and install sectors.

CEDAR Audio Studio 6

The latest version of CEDAR Studio boasts three new processes and compatibility with both AAX Native and VST. The new processes are Auto Dehiss, Declick, and Decrackle. Auto Dehiss embodies a more advanced algorithm that enables the software to determine the broadband noise content and remove it without the introduction of unwanted side-effects or artifacts.

The bottom line:

"Studio 6 builds on the success of the original CEDAR Studio and CEDAR Studio AAX. It offers even more ways to improve the sound quality of your audio while maintaining ease of use."

Joanne Ruddock, Audio Media

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Looking Sharp in Manchester

A few miles from the concrete and glass of MediaCityUK is The Sharp Project, which is also home to TV, radio, and post-production facilities but with a more independent, almost unconventional air. Among them is recording and audio for picture studio 80 Hertz. Kevin Hilton pays a visit.

The Sharp Project could be seen as 'the other' media centre in Greater Manchester. MediaCityUK at Salford Quays grabbed the headlines during its construction and boasts high-profile tenants including the BBC and ITV, but the development just to the north of Manchester city centre is just as important and perhaps more notable for its nurturing of emerging facilities and freelancers working in television, radio, and new media.

It was conceived as a "digital content production complex" with the backing of the City Council. The building was at one time the UK logistics centre for the Sharp consumer electronics company. This massive space has provided room for sound stages, low-cost offices built into converted shipping containers, and an open-plan 'campus' area. And tucked away from the main thoroughfares, offices, and production areas is 80 Hertz.

This music recording and audio for picture post-production studio was the first business to agree a lease and move into The Sharp Project. Company director, engineer, and producer George Atkins had been looking for somewhere to re-establish his own studio set-up and took the opportunity to be part of the venture from the beginning.

Atkins graduated from Manchester University with a BA (Honours) in music, business, and IT and spent a year looking for a recording studio job. Eventually he decided against working for someone else at a "pittance" and began to put together his own recording operation. The first incarnation of 80 Hertz was established in 2005 in a "rabbit-warren" underground complex not far from the city's fashionable Northern Quarter. During his time there Atkins worked with a band called Keith, which he had first come into contact with at university, and on tracks for Lilly Allen and Chase and Status.

This built 80 Hertz's reputation and profile, but in 2008 the new management of the premises began "pushing out" the tenants and converted it into serviced offices. This left Atkins with "a load of studio gear and some clientele but no studio". While freelancing at Blueprint Studios he "caught wind of the Sharp Project", which was in its embryonic stages.

Atkins negotiated a lease and construction of the new home for 80 Hertz started in August 2010. The facility was completed in late April 2011, housing a music recording studio with a big live space, control room and vocal cubicle, and a post-production suite, featuring a main mix area and voice-over booth.

Main Space

The main recording/performance space of the music studio is wood-lined and covers 1,000sqft (93sqm), large enough, Atkins says, to accommodate 30 to 40 musicians. This live space was designed by Atkins and acoustic consultant John Wood. The main area is floated and incorporates an isolated, solid concrete booth for drum sessions, with a smaller area "tacked on" to house what Atkins describes as "noisy amps". A vocal booth is on the opposite side of the control room with, like the other areas, full visual communication through large glass windows.

> **"We've got enough mics, EQ, and channels on the desk to allow for an absolutely standout sound recording – as long as the engineers and producers are up to it." George Atkins**

"Essentially what a band can do is roll in at ground floor level, plug in, tune up, and record live but get the isolation as if they were tracking it," Atkins says. "We've got enough mics, EQ, and channels on the desk to allow for an absolutely standout sound

George Atkins in 80 Hertz
Picture: Tristan Poyser

recording – as long as the engineers and producers are up to it."

The control room is based around a 24-channel AMS Neve Genesys console, augmented with eight vintage Neve 1084 and 16 88RS equalisers. The combination of digital and analogue technologies is underlined by the incorporation of control units for the digital audio workstation system, total recall, automation, and onboard digital converters.
The outboard selection veers more towards the classic, offering Manley Vari Mu valve compression and passive EQ, a Universal Audio 1176LN limiting amplifier, and Lexicon PCM91 reverb.

As is now almost standard today the main recording and editing set-up is Pro Tools, currently version 11 HDX. This is supported by HDX/MADI and Avid HD sync I/O systems. Other tastes in DAWs are catered for through Nuendo 5.5.6 and Logic 9 and X, plus a range of plug-ins and software. The more old school client is also catered for, with two reel-to-reel tape machines – a Soundcraft 24-track and a Studer A810 quarter-inch – lurking at the back of the control room. The monitor loudspeaker choice is wide and eclectic, with a Quested 5.1 surround system joined by Westlake Audio BBSM 12s, Adam S3x and A7x, Genelec 8030a, Yamaha NS10s, and Avatone Mix Cubes.

Regional Appeal

In some respects 80 Hertz is a throwback to the days of the big London recording studios such as Advision, CTS, and Olympic, all of which are now long-gone as technology and musical styles moved the business towards smaller but well-equipped 'home' studios owned by producers or musicians.

Atkins acknowledges this and says that as space in Manchester was cheap enough to invest in, he could capitalise on the decline of the studio market in London: "Because the big studios closed down in London, those places are becoming more sought after and people are willing to pay a premium to get the quality sound from the outset.

"With the technology that's available now, especially in laptops, you can take away your data that you recorded in an optimum environment and do all the legwork at home and come back in and balance or mix on the console and still come out with a production that sounds a million dollars but you wouldn't have to burn up studio time to get it."

This, Atkins observes, was his "dream scenario", partly based on his musical tastes and upbringing. Now in his early 30s, he says his attitude towards recording is "born from listening to old records", which informed him about live sessions and vintage processing: "I just prefer the performance value. And the human error involved in those records lasts a lot longer than current pop, which has churned out the likes of *X Factor* and major labels that are looking to make a quick buck. But the old ways of working seem to be more popular again."

Atkins' choice of desk for the recording studio sees him straddling the modern, digital worlds and the more classic analogue domain. "The Genesys is very multipurpose," he says. "It can accept a FireWire input, so someone could bring in a laptop and use the Neve desk as an interface. They've got 48 ouputs, 24 inputs, Neve A/D-D/A conversion, the flagship 88 RS preamps, 1084 EQs, full automation and recall, motorised faders and the ability to control a DAW like Pro Tools or Logic. So it's almost three to four-fold worth of gear than a standard large-format analogue desk. And it does 5.1 as well. It was the best option because we wanted to blend the old school techniques with the new tech that's available and faster ways of doing things."

Post Production

The multipurpose aspect has proved useful more recently because the music studio and control room have been used increasingly for post work, notably automated dialogue replacement. "We're specialising in ADR at the moment," Atkins explains. "We've upgraded the studio so it's got picture capability as well, plus a MADI interface and connections through Source-Connect, a telephone balance unit, and ISDN."

A recent session using this set-up was for the upcoming Ron Howard film *In the Heart of the Sea*, which involved the director coming in on Skype, the ADR mixer in New York and actors at 80 Hertz and De Lane Lea in Soho through ISDN. "They were all talking at the same time so that tested our mettle," Atkins says.

The post-production studio is across the hall from the music area and is connected over a Cat5a network, so its control room can be linked to the live space. At the time of *Audio Media*'s first visit to 80 Hertz towards the end of 2011 the post suite was still being fitted out and an Avid C24 was part of the installation. That has been replaced with an Avid Artist Mix with touch-sensitive motorised faders and controllers for the DAWs. The room also features a Quested surround rig, plus Adam, Genelec, Avatone, and Bose Soundlink loudspeakers. A voice-over booth is at the back of the control room, with the picture for sound aspect provided by a Panasonic PTRZ370 HD projector and 174in screen.

The upper level of 80 Hertz's premises within The Sharp Project includes a kitchen and what was originally intended to be the green room. Atkins says this is now more of a writing area and is being used by composers including Max Brodie, a member of the Audio Network stable.

From its original conception as a music studio with post-production capability, 80 Hertz has expanded in only three years to also offer ADR, audio dialogue clean-up and restoration, DVD commentary recording, and online mixing. It has also justified George Atkins' decision to stay in Manchester and be part of The Sharp Project, proving that technology and a broad variety of skills will bridge distances and metropolitan boundaries. ■

www.80hertz.com
www.thesharpproject.co.uk

Expert Witness

Having worked with artists as diverse as Prince, Radiohead, and Johnny Cash, Charles "Chicky" Reeves knows a thing or two about microphones. Here he gives his thoughts on what kit to use in a range of situations.

That question of "which mic for what" comes up so often. It's akin to the eternal question, "how long is a piece of string?" in that it all depends on the variables, such as what the instrument is, how well it projects, where it sounds best within that projection range, and how wide is the useful part of its spectrum. All this is augmented by the musical style and the production elements desired for the performance. So, to answer this question best, I will focus on my own experiences with mixing in which I had absolute say in microphone choice.

To jump right in, we'll start with the bottom and work our way up:

Drums

I have been accused of over-doing it with drum mics, but mine is not the most complicated setup. Listed below are some general choices that seem to work in most instances and why:

Kick: The Yamaha Sub Kick works great live and means I don't need to EQ in very much extra low-end (below 80Hz) to get the underneath sound I love so much. Plus, it looks nice in its wooden shell and black mesh audience-facing head.

AKG's D112 is possibly the most common kick mic. One could just about get away with using it by itself, but I use it for getting just the body-punch of the kick. Placement is inside the shell, centred, aimed squarely at where the beater meets the head. At the console, this mic is augmented with a soft amount of gating and then heavy compression with a slow attack so that it almost acts as a transient shaper.

Shure's Beta 98 is used as the typical PZM-style mic and is great for getting a full-range sound from the kick. This, too, could be used by itself. My preference is to use it in conjunction with the above mics for a more complete kick sound. A substitution for this is the Audio-Technica 4050. It's a large-diaphragm condenser, so a little unusual, but placed just outside the front hole, it sounds amazing!

Snare

Using an Electro-Voice 408 instead of the Shure 57 (of any variety) is certainly a deviation from the norm. The Electro-Voice, though, gives a snare the crack sound without any harshness. Plus it is really easy to get into very tight spaces! This mic is placed about 6cm above the head, about 4cm in from the rim, aimed squarely at either the centre of the head or wherever I see the most stick marks.

Shure's SM81 is one of my favourite small-diaphragm condenser mics. As an under-snare mic, it's pretty unbeatable. Lots of natural sizzle above 7kHz, plus it can really deliver some extra body for the snare... provided one remembers to change the phase.

High-Hats

Either the AKG 451 or Shure SM81 will do just fine. Typically, I won't use much of this, preferring to get much of the sound from the overhead mics.

Toms

Did I mention that the Electro-Voice 408 is really easy to get into tight spaces? Plus, it handles the punch from toms very well. It can be light on low-end, but the low end it lacks is usually at a point I would be rolling off anyway. This is my go-to mic for more aggressive sounding drumming.

Shure's Beta 91 is great for a more "slick" tom sound. It's full range and great for hydraulic heads being hit hard or coated heads being hit with brushes. This is what I use for RnB or jazz acts.

Overheads

Here I usually opt for A-T's 4050 or my own bespoke ribbon mics. The 4050 is a workhorse mic for me in both the studio and live environment. And for mic'ing up overheads, these are excellent.

My own ribbon mics are an option depending on the drummer's style and the venue. If the drummer is more of a "vintage" style player, they give a slightly duller and more aggressive sound. Unfortunately, many venues don't have the greatest on-stage acoustics and since my ribbon mics are figure-8 pattern, what they pick up on the back side might not be the most pleasant sound. Therefore, I use these sparingly.

Bass, Guitars, Keys

The Universal Audio Solo 610 is a great mic preamp, but in this case, I love using it as a DI. The bass is nice and clean if you want, but I love to drive it a bit at the input stage of the 610 for a slightly fat, not-overpowering sound.

I also like to mic up the bass amp cabinet, if it's a good sounding one, and when I do, my choices are the AKG C12 (a rare-ish expensive mic) or the beyerdynamic M 88. The C12 I'll use for more delicate gigs or ones where the bassist has spent a great deal of time crafting his bass tone. The M88 is a solid dynamic mic which, when combined with the DI channel, is a nice, full-bodied tone.

For guitars, again, the A-T 4050 works great just about all the time. Slightly off-axis, this mic will accurately reproduce the tone of the amp. It will, however, need padding and a high-pass filter (both switched on the mic itself).

Acoustic Guitars

I have a real problem with using pickups in acoustic guitars. If I am forced to use one, I'll grab a Radial or BSS DI and use the console to process the sound into something I dislike less.

But I mostly am able to mic them, and for that, I prefer using a Shure SM81 with the high pass filter turned up. The positioning is coming up from the floor about 20cm from where the neck and resonance chamber of the guitar meet at a 45° angle. Mostly, avoid the hole. The Helmholz resonance from the hole sounds great in a room, but not through a PA system. In a live situation, it's rare to be able to double-mic an acoustic, so this position is a great compromise.

Vocals

This all depends on the singer and his/her style, but here are a few of my favourites:

The Shure SM58 is my usual dynamic mic for live. I've used the SM7B, which sounded great, but for live it's not very pretty or practical. SM58s can sound different from one to another with wear-and-tear, but generally, they're as reliable and good as it gets.

The Heil PR 35 is a great, great mic. It cuts through very nicely, has a beautiful sound, and is excellent at rejecting feedback and spill from the stage.

Neumann's KMS 105 is also a great mic, especially for a quieter singer on a quieter stage. This thing sounds beautiful, but it is a Neumann.

Everything Else

For everything else, be it amps, percussion, accordion players that show up unexpectedly (I'm thinking about Grace Jones gigs), having a few Audio-Technica 4040s, some Shure SM81s, and a few beyer M88s around will get you out of any tight spot.

Conclusion

There are so many mics and so many situations which call for different choices. The ground beneath your feet can shift suddenly, so be prepared and have a backup plan if these examples don't work for you. As with anything, use your instinct and learn from your mistakes. And don't be afraid to change out a mic if it isn't working for you. ■

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Live Microphones

The perennial problem of live production is finding the right equipment to reproduce that elusive studio sound; many live mics just can't produce that same studio clarity, while studio mics aren't built to handle the rigours of live performance. This Technology Focus rounds up some of the latest offerings.

AUDIO-TECHNICA

AE5400

The Artist Elite AE5400 large-diaphragm cardioid condenser model is designed to deliver exceptional vocal sound on stage. Featuring the same element as the classic AT4050 studio mic, its large-diaphragm capsule is said to ensure an accurate, natural response, while anti-shock engineering means low handling noise and quiet performance. Able to handle high SPLs and offering protection against plosives without compromising clarity, it's one of the star performers of Audio-Technica's Artist Elite live microphone range.

- True condenser design
- Integral 80Hz HPF switch and 10dB pad
- Double-sided PCB uses surface-mount components for robustness and lack of electrical noise
- Superior anti-shock engineering for low handling noise
- Custom transformer for isolation against RF noise and smooth, linear sound quality

eu.audio-technica.com

SHURE

KSM9HS

A premium vocal microphone with switchable hypercardioid and subcardioid polar patterns, the KSM9HS extends the ability to capture vocal subtlety with extraordinary detail to deliver clear articulation, functional flexibility, and precise vocal reproduction for a wide range of live performance applications.

- Higher gain before feedback, and decreased proximity effect
- Exceptional consistency across all frequencies
- Class A transformerless preamplifier circuitry
- Dual gold layered, low-mass Mylar diaphragm design
- Gold-plated internal and external connectors
- Advanced suspension shock mount
- Premium electronic components including Class A transformerless preamplifier circuitry
- Switchable polar patterns (hypercardioid and subcardioid)

www.shure.co.uk

AKG

D12VR

Jazz, rock, metal, country, or a sound yet unheard is catered for with the D12VR's three active and traditional passive modes. Whether your instruments are bass, drums or the recording thereof, the AKG D12VR is said to faithfully capture or shape your tone with the four Versatile Response stages. The reference large-diaphragm dynamic microphone with cardioid polar pattern has a thin diaphragm to enhance the low frequency performance. Its warm sound is realised by the original C414 transformer, which is said to be especially impressive at high signal levels.

- Patented switchable active-filter presets to match the drum's character
- Original C414 transformer delivers a warm sound, especially at high signal levels
- Ultra-thin diaphragm for accurate reproduction of instrument sound
- Optimised bass chamber for enhanced low-frequency performance
- Cardioid polar pattern rejects overspill from nearby instruments

uk.akg.com

SENNHEISER

E935

Sennheiser's cardioid e935 is a fully professional vocal microphone, developed to cut through high on-stage sound levels. Its rugged metal body and advanced shock-mount design mean it is designed to cope with demanding touring environments, while its consistent on-/off-axis response and hum compensating coil cope with challenging RF situations.

- Dynamic cardioid microphone
- Clearly emphasises voices on loud stages
- Transparent high-end and warm, defined lower mids
- Highly consistent directivity and feedback rejection
- Extremely rugged metal housing, shock-mounted capsule and hum compensating coil

en-uk.sennheiser.com

DPA

D:FACTO

The d:facto vocal microphone is said to bring true studio sound to the live stage with its 160dB SPL threshold, three step pop-protection grid and superior gain before feedback, offering excellent sonic reproduction and an extraordinarily natural sound. Its supercardioid pattern and definition gives high separation and true sound colour on stage, equally suitable for PA amplification and recording, while a robust three-stage pop protection grid built into the microphone removes unwanted noise. In addition, DPA's wired handle and adapter system allows d:facto to integrate seamlessly with many professional wireless systems, such as Sony, Lectrosonics, Shure, Wisycom, and Sennheiser.
The flexibility of the adapter system gives the user the possibility of choosing either a wired DPA handle or the professional wireless system of their choosing, with no loss in the sound quality.

- Extraordinarily natural sound
- High separation
- Very low handling noise
- Extreme SPL handling: 160dB
- Flexible adapters for wireless systems

www.dpamicrophones.com

BLUE

ENCORE 200

The enCORE 200 is a dynamic mic that uses phantom power for clean, consistent sound and low noise, making it suitable for live, studio, and broadcasting applications.
This mic is said to give users outstanding frequency response for clear, detailed vocals onstage, and it's built to handle the rigours of the road.

- Proprietary dynamic capsule to deliver natural vocals, balanced highs, detail, and clarity
- Active dynamic circuit for versatility in application
- Transformer and hi-pass filter for smooth transients
- Unidirectional strong off-axis noise and feedback
- Cardioid pickup pattern rejects feedback and outside noise bleed
- Unique styling and craftsmanship, including laser engraved trim and CNC machined grip

www.bluemic.com

RØDE

HS1

The HS1 headset is part of a wide range of wearable mics from Australian stalwart RØDE. This lightweight low self-noise mic is fully adjustable and comes with a collection of accessories.
The headset is connected via a 1.2m shielded, detachable Kevlar reinforced cable that has been strain tested up to 10kg to ensure reliable performance. Integrated cable management on the retainer body and an additional cable management clip minimises visibility, while providing maximum mobility for the wearer.
Available in pink or black, HS1 is compatible with nearly all wireless systems through RØDE's broad Micon connector range.

- Ultra-discreet appearance
- Omni-directional polar pattern
- Low self-noise
- Lightweight construction
- Three axes of mechanical adjustment for perfect fit with malleable tube arm and headband for finer adjustment
- Includes mini-furry and pop filter/windshield
- Includes anti-trauma case

www.rodemic.com

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BEHRINGER

ULTRAVOICE XM8500

The XM8500 is a handheld dynamic mic that provides a 50Hz to 15kHz frequency response and includes a two-stage pop filter to minimise breath and pop noises. The cardioid pickup pattern captures the source signal while shunning off-axis sound, making it ideal for live vocal applications and recording amplified instruments.

- Dynamic vocal microphone with smooth mid-frequency presence rise for excellent voice projection
- Ultra-wide frequency response for brilliant and transparent sound
- Extremely high signal output lets voices cut through
- Cardioid characteristic minimises background noise and feedback
- Shockmount system to cut down handling noise and feedback
- Integrated spherical wind and pop noise filter

www.behringer.com

BEYERDYNAMIC

TG V50D

With a sleek design and rugged construction, the dynamic TG V50d is an excellently tuned live vocal microphone. Its balanced sound, high feedback rejection, and wide pick-up range thanks to its cardioid polar pattern make the TG V50d a reliable companion.

- Finely-tuned volume behind the diaphragm for free diaphragm vibrations and improved bass response
- Treble resonator to expand the upper frequency range
- Special sound holes for maximum feedback reduction

www.polaraudio.co.uk

LEWITT

MTP 740 CM

The MTP 740 CM is a handheld performance microphone with a 1in studio condenser capsule combining the qualities of a large-diaphragm studio microphone with the core features of the top of the line performance flagship MTP 940 CM. It's focused on providing the biggest bang for the buck – on performance rather then features.

- Superior dynamic range of 140dB(A)
- Low self-noise of 15dB(A) thanks to direct coupling technology
- Max SPL of 165dB(A) for 0.5% THD
- Two step switchable low-cut and attenuation
- Illuminated setting indication for quick and easy handling in dark environments

www.lewitt-audio.com

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"There is no doubt in my mind that the R1s are the most honest, true, and best-sounding headphones I have ever heard."
Ross Simpson

Flare Audio Reference R1

'FULLY' OPEN HEADPHONES

Ross Simpson takes the time to get his ears accustomed to the R1s and is blown away by the results.

Back in 1881, long before iPods, iTunes accounts, and heavily compressed audio, headphones had very little to do with music. The earliest versions weighed in at around 10 pounds and were used by telephone operators. Fifteen years later the Electrophone system of headphones was allowing some wealthier individuals to phone up and listen to music produced on a stage miles away.

The first successfully created modern pair of headphones date back to 1910 and were hand made by a man named Nathaniel Baldwin. They were the only way to listen to personal audio signals before the invention of the amplifier.

I can still remember my first pair, enabling me to listen to Dire Straits' *Brothers In Arms* without bothering my parents on those long car journeys. A Sony Walkman and cheap plastic headphones resulted in a particularly terrible sound, but that didn't seem to matter when set against the novelty of personal audio on the move. Headphones have come a long way since then.

Modern Times

Thirty years after Dire Straits I now own a professional recording studio, with great monitors including PMCs, NS10s, and a pair of Sennheiser HD600s for mix reference (usually for pan, reverb, and phase correction). Using these headphones is a clear sign that the 'sound' has improved greatly over the years. They are louder, more dynamic, and have an improved frequency response. That said, their phase accuracy, sound stage placement, and levels of distortion are not 'perfect'.

I'm used to working with a huge variety of music from simple folk to full orchestral arrangements, recorded in some of the best studios in the world. I was therefore keen to learn more about Flare's R1s and how they might help my workflow and mix corrections.

Flare Audio is a relatively new company, whose founder Davies Roberts is motivated by his desire for undistorted, clear, and detailed sound reproduction. He is the company's driving force and the pioneer of its innovative technologies.

Design

The R1s certainly look the part with their retro shape, brushed aluminum body, and bright orange anodised rim. It has to be acknowledged that the R1s are weighty, but I like this, as they have the feel of a solid and well-made piece of British engineering, with anti-twist cable and a quality machined finish. Improvement? Perhaps they are a little tight – after longer periods of listening my ears felt slightly cramped and rather warm! Maybe I have a large head? I have discussed this with Davies and I believe they are looking at larger ear pads, although this is a difficult one because the smaller pads create the much needed 'seal' against your head. That said, I would be happy to use the current design on a daily basis in the studio.

My first experience of the R1s was listening to the very well produced acoustic 2005 album by Alanis Morrisette, *Jagged Little Pill*. Having heard Flare's incredible X5s, Q18s, and other PA speakers and having been run through the company's radical new technology (more on this later) I thought I knew exactly what to expect. However, nothing could have prepared me for the heart-stopping punch, detail, and accuracy of them. The snare drum on one particular track took me by surprise and made me jump slightly, due to the power behind it. It took around 15 to 20 minutes for my ears to become accustomed to the headphones (Flare say it's important to give your ears between 15 and 60 minutes to adapt) – they are not your usual over-bright sound that we've all become accustomed to. After this initial period, I began to hear for the very first time on headphones, what true, distortion-free sound reproduction could actually be like, and with all the frequencies reaching my ear at the same time. I don't believe this has ever been possible before the R1s. They simply tell the truth, the whole truth, and nothing but the truth!

Using the R1s in the studio has been a real asset because I already trust them for critical mix decisions. My colleague Simon Allen even completed a mix on them that was then unchanged on listen-back through the studio monitors!

The Science

Now for the heart of the system – that radical new technology. Flare's patent-pending Vortex technology seen in its PA systems has been applied to both sides of the driver due to the proximity of your head when using headphones. This allows a completely linear movement of the driver through a 'near perfect' infinite baffle, thus allowing phase accurate transfer of sound waves to your ear. The company's 'Space' technology is the even-compression force on the structure both front and rear, which eliminates resonance from the central structure with obvious benefits to the

Joanne Ruddock speaks to Flare founder Davies Roberts about the move into the headphones market and the next step for the company.

What made Flare enter the headphone market? What can the company bring to this area?

Flare technologies were created to unlock the secrets of creating totally accurate sound regeneration. Now unlocked through various patent applications and fully understood, Flare is scaling the technology down into headphones. Placing the technology so close to the ear removes the damage created by room interference; therefore the benefit created takes the listening experience to another level. With R1 being launched into the professional and audiophile markets, the intention is to license the technology to other manufacturers for the mass consumer markets. Initial discussions with potential license partners are already underway.

We often get press releases stating products are 'revolutionary'. How would you justify this with regards to the R1s?

We believe the R1s to be the first 'fully open' true infinite baffle headphones, that subsequently produce distortion-free sound. The traditional approach to headphone design is similar to that of loudspeakers. That is, enclosed sealed areas create a spring effect on the driver which creates distortions that require 'tuning'. Flare's technology removes the enclosed pressure spring effect on the driver, as well as removing all standing wave interference. This enables linear driver movement, which in turn creates mirror image sound reproduction from the input source signal. This produces pure, natural sound with a full frequency response that has not been previously possible.

The headphones feature the impressive-sounding Space and Vortex technologies. What are these and what effect do they have?

Space technology is applied to R1 through four stainless steel bolts. Compression is applied to the entire structure which 'clamps' the sidewalls, this unifies the enclosure resonance into one resonant frequency that stops the structure resonance from interfering with driver movement.

Vortex technology is an exhaust silencing technology. Spiralled around the driver on both sides, the vortexes remove standing wave interference and all residual pressure interference without creating opposing energy interference (that simple holes would create). Wall structures reflect sound which causes distortion through time delay. Spiralling the vortexes around the side wall structure directly in front and behind the driver means that reflected sound is completely removed and all residual pressure released.

Have you had any feedback on the R1s since the PLASA launch?

The feedback received since PLASA has continued to be one of shock. Some people immediately hear the lack of distortion while others take a couple of tracks to realise what they are hearing. Distortions confuse as they can make sound appear louder to the untrained ear. Completely removing distortion means that there is a great deal more overall information heard, especially at the extremities of the frequency range. Traditionally people have been used to bass in headphones as a thump of pressure and high frequencies as a crash of multiple frequencies colliding together. This is a direct consequence of restricted driver movement, as frequencies are merged together during the restriction of driver movement.

What's next for Flare Audio – are there any other areas of the market you'd like to explore?

Flare's R&D team is constantly working on developing the technology into all other sectors of sound. Most of this work is kept secret, however we can reveal that work is already underway miniaturising the technology so that it can be placed into the ear…

What is known as the 'closed box' has been the real-world equivalent of an infinite baffle because the rear of the drivers are wholly enclosed. However, this is a bit of a cheat, especially when considering the trapped air inside, which causes friction and cabinet resonances. This is responsible for one of the big problems in loudspeakers, the asymmetry in the driver's movement. An 'ideal' infinite baffle would present no resistance to the compression (inward) movement of a driver. The result of this asymmetry in the driver's movement is a type of distortion that Davies claims to have eliminated with Vortex technology. That is, the geometry inside the box creating a vortex behind the driver before the air comes out of the rear port. A vortex kills amplitude but maintains phase accuracy and this allows us to do two things: first, to kill amplitude before it comes out of the port; second, to speed up the sound in certain ways so that when the driver presses a compression or a vacuum behind the driver, the ports don't add any friction. The result of this is a driver that is as happy to go in as it is to come out!

Market?

Perhaps, my one concern with Flare and the R1 headphones is their market. Who are the target users? Who will buy them?

People in general notice quickly if they see a bad picture on a cheap TV, but it takes a little more time to notice bad quality audio as it surrounds us all the time in the form of the MP3. 'Music on demand' has resulted in the pollution of our airwaves with a highly compressed, uninspiring, distant relative of the original sound recording. Depressingly then will this revelation in audio pass by the average Joe or Jo-ess? Will they lack interest in a pair of headphones that don't have that 'Hi-Fi' sheen their modern day ears have come to expect?

Will, in addition, old-school sound engineers, possibly too stuck in their ways, want to re-learn how to hear, as the R1s will question every mix you have ever created or heard?

So this leaves true audiophiles and modern, enthusiastic sound engineers. There is no doubt in my mind that the R1s are the most honest, true, and best-sounding headphones I have ever heard and I for one believe that, if you are willing to take the time to adjust to them, they will give you in return the most realistic, natural reproduction of sound possible to date – and this reviewer for one will be putting his order in for a pair – at the very reasonable pre-production price of only £499. ■

INFORMATION

Feature Set

- Distortion free sound, even at full volume
- Highlights details previously masked in tracks
- True transfer/transmission of source material
- Sonic immersion with precise stereo imaging
- Introductory price: £499

www.flareaudio.com

The Reviewer

Ross Simpson
started his career as a professional dancer and singer, working with artists such as Kylie Minogue and Geri Halliwell. He now runs Woodbury Studios where he produces music for a variety of regular clients, and large-scale shows for customers in the UK and abroad.
www.woodburystudios.co.uk

sandwiched components, allowing them to operate closer to their theoretical limits. Inside this structure is a bit of closely guarded geometry that constitutes its Vortex 'porting' technology. It's important to stress here that the 'porting' does not refer to a reflex port, which is used in many speaker designs to extend bass response by creating a resonance just below the natural cut-off point on the system. Indeed, the whole point of Flare's Vortex technology is to verge on the ideal infinite baffle, where the front and rear of a driver are separated by an infinitely large brick wall.

iZotope RX 4 and RX 4 Advanced

AUDIO REPAIR AND ENHANCEMENT TOOL KIT

Less than a year since the release of RX 3, iZotope has announced version 4. So what's new? **Simon Allen** finds out.

iZotope left quite a significant gap between the release of RX 2 and RX 3. In fact three years of R&D went into redesigning the algorithms and user interface of RX 3. Since its release only last year, it has quickly become the industry standard for audio restoration and has set a new precedent of what is possible. Professionals across all sectors of the audio industry, including myself, are now blown away by the options available when working with all types of audio.

Audio restoration was typically used in the post-production world for dialogue cleaning and enhancing. However, while RX 3 pushed the boundaries and quality compared to existing restoration tools, it was the platform that opened up these possibilities across all branches of the audio world.

Creative results were also possible in music and sound design in ways we haven't had before. I spend most of my time recording and mixing music, and yet find myself 'secretly' calling upon RX every week and it is now one of my most important tools. If you haven't experienced what RX can do for you as an audio professional, then you need to take a serious look.

Surprisingly, less than a year since the release of RX 3, iZotope has now released

"These are a great set of new features and the whole package is more refined and sophisticated."
Simon Allen

version 4. So, what can we expect and can there really be further breakthroughs in audio restoration so soon?

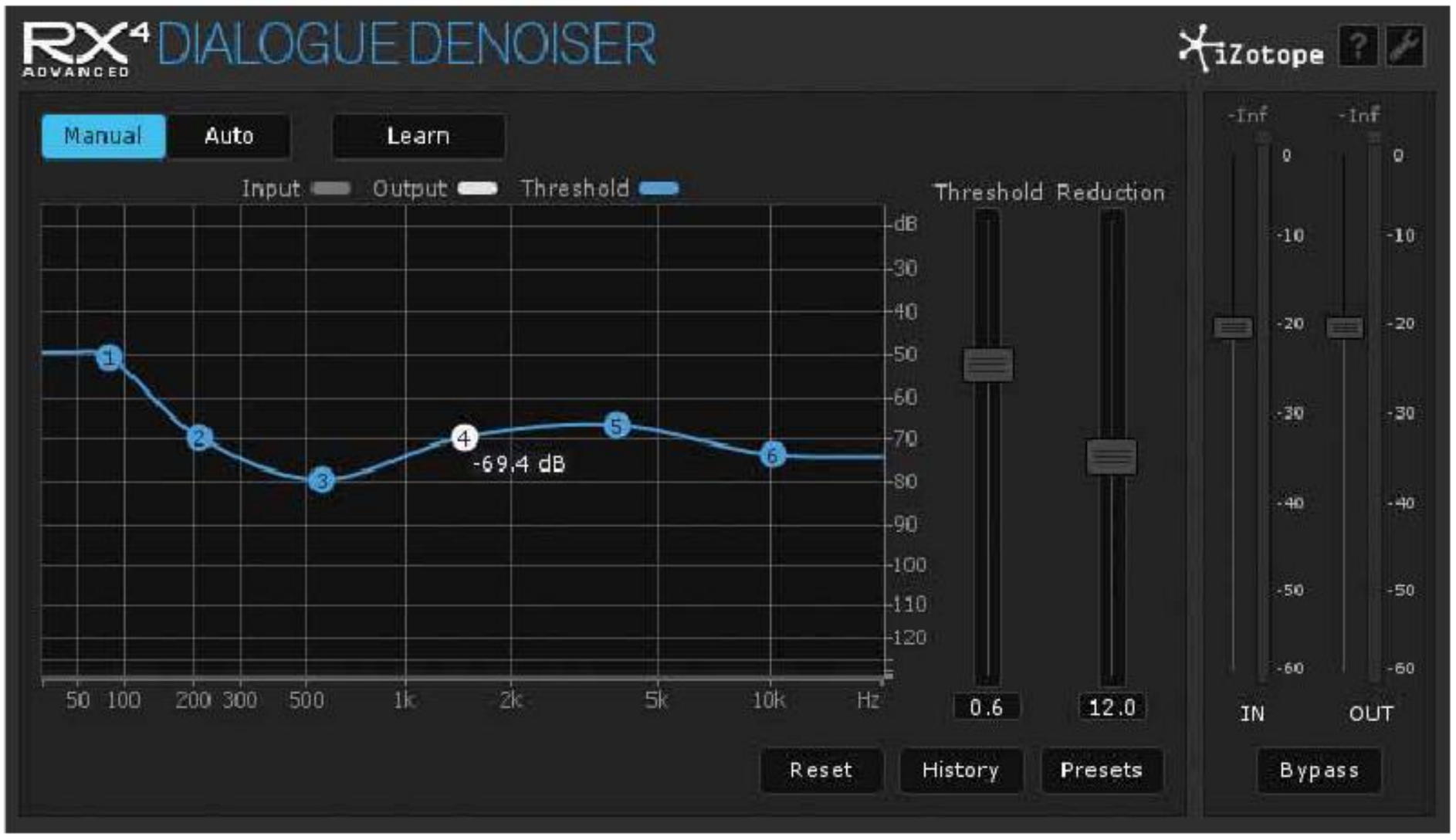
Overview

For those that haven't used RX 3 before, it comes as a standalone application and a series of plug-ins for using within DAWs, providing a suite of high-quality audio restoration tools. The tools, which can either be used as different modules within the standalone application or as separate plug-ins, include: Dialogue Denoiser, Spectral Repair, Denoise, Dereverb, Declick, and Hum Removal.

When discussing my findings of RX 4 with iZotope product specialist, Matt Hines, he confirmed that there aren't any particular further developments to RX 3's modules and algorithms, but that RX 4 is an update that brings many more additions to this powerful tool kit. The only module/plug-in that has seen some improvements in terms of ability and sound quality is Declick. I discovered this myself when trying to repair a badly edited flute solo, which effortlessly became very smooth.

The new features include subtle improvements in the GUI, which looks great and is very intuitive to use, especially if you are *au fait* with other iZotope products. The Dialogue Denoiser module is now available in the standard RX 4 package as well as the Advanced, which is a hugely powerful yet simple tool for post-production and vocal tracks.

There is a new feature which most of us have seen in Pro Tools for a while now called Clip Gain, but it is really useful



having this available inside RX 4 while you are processing other artefacts about your audio clip. Another small and simple tool included in this update is Reverse. Just like the Pro Tools reverse, this reverses your audio selection, but RX 4 adds a new ability. With any rectangular selection tool in the spectral display, you can reverse only certain frequencies, which offers an interesting new sound design tool.

The Hum Removal module now has an 'Adaptive' mode which tracks the frequency the hum is sitting on with its harmonics, adjusting the frequencies accordingly over time. This is helpful when working on multiple clips from different locations, or perhaps a tape recording where the hum frequency will change as tape stretches slightly. There are many other smaller improvements under RX 4's skin, such as further file exporting options, and general behaviour such as movable tabs, metadata display, time code rulers, etc. These all add up to a clearly more refined and developed product.

Advanced Highlights

Above I've mentioned most of the new features found in RX 4, but it's the Advanced package which sees the most notable additions:

EQ Match

This is an incredibly useful tool, which again the likes of post-production engineers and creative personnel in music and media will hail as a eureka moment. This module will analyse the EQ of clip and then process a different take, which might have been on a different mic for example, to sound the same. There has been attempts from other manufacturers but, believe me, this is incredible. It's so easy and fast to use, while also considering nuances and differences such as distance from the mic.

Ambience Match

As the name suggests, this new module effectively turns the Denoiser in reverse, to take the environment noise from one audio clip and apply it to another. It will also allow you to create long sections of constant ambient noise to connect between edited dialogue from where you might not have enough free ambience to utilise and edit.

Leveler

Drawing on the power of the new Clip Gain feature, RX 4 Advanced will automatically process the dynamics of a vocal or dialogue clip. Lifting the quiet parts as well as softening the louder parts around a chosen loudness gives a far more natural result than simple compression or limiting. The resulting audio file can then have less master limiting applied and feel less 'squashed'. A very fast way to balance out vocals.

Loudness Compliance

Taking the loudness measurements from your audio, this will process your audio to fall in line with industry-standard loudness specifications. In RX 3, we were only able to see what our loudness measurements were with iZotope's Insight plug-in, but RX 4 will process whole final mixes to be compliant with your network's specifications.

Complete Integration

For me, this is one of the biggest updates with this release. The way we work with RX has changed. The standalone application is still there, and so are most of the plug-ins that RX 4 and RX 4 Advanced offer. What's new are the additions of the 'Connect' and 'Monitor' plug-ins to create a complete round-trip workflow with any host DAW or video editing software.

Launching the Connect plug-in from your host application allows you to send any clip of audio to the RX 4 standalone application where it's so much easier to work with RX utilising all the different modules within one window. Once you've made your adjustments you can then send the audio back to your host application and render it in place. The Monitor plug-in is there to facilitate a simple auditioning path while working in the standalone app as an alternative sound output option. This is particularly beneficial for Pro Tools HD and HDX users when running Pro Tools software – typically you want to monitor the audio from RX out of the same hardware.

This is a massive improvement that simplifies clunky windows and multiple instances of RX into a more powerful and simpler workflow. I can see that for a lot of users, this could be the main reason for upgrading to 4 from 3. However, I also have my reservations about this new method. The result of this workflow change is that we've lost the spectral repair module as a separate plug-in which I was using as a Pro Tools audiosuite plug-in. I think this is a shame, as there are some occasions when I want to just 'nip' out a small sound using spectral repair on one clip, which now takes slightly longer as you have to set up the 'connect' and 'monitor' paths as well as the standalone app.

Conclusion

What I love about RX 4 is the way that iZotope has utilised its very powerful and impressive sounding DSP in further useful and creative ways. iZotope fully understands the success that was RX 3, and have further exploited the possibilities of their algorithms that are helpful and inspiring. The new tools have further enhanced what can be achieved with troublesome audio. RX 3 cut production time by sometimes avoiding the need to re-record, or time consuming and expensive ADR sessions. RX 4 has now saved the time we spend in RX through its improved efficiency. These are a great set of new features and the whole package is more refined and sophisticated. ■

INFORMATION

Feature Set

- Dialogue Denoiser enables the restoration of audio recordings in real time
- Spectral Repair can be used to visually isolate and remove unwanted sounds
- Adjust and level the volume with Leveler (Advanced) and Clip Gain

www.izotope.com

The Reviewer

Simon Allen
Is a freelance internationally recognised sound engineer and pro-audio professional with over a decade of experience. Working mostly in music, his reputation as a mix engineer continues to grow.

Antelope Zen Studio

PORTABLE AUDIO INTERFACE

Antelope Audio has a significant reputation in the worlds of clocking and conversion. In Zen Studio the company is attempting to combine some of its existing expertise into the well-worn area of USB 2 audio interface design. Now USB 2 audio devices have been around for ages and how could we possibly get excited about a new one? Well Antelope's answer to this involves chucking the kitchen sink into an audio interface portable enough to pop into your back pack but powerful enough to crush all opposition.

So what's in the Zen Studio's kitchen sink? Here we go: 12 mic/line inputs, four of them capable of being instrument inputs; eight other analogue line level inputs; stereo monitor outputs and two independent headphone outputs; eight analogue line outputs; two ADAT in and two ADAT out, stereo SPDIF input and output on coaxials and two TRS inserts. And word clock in and out, and 16 channels of onboard DSP processing, all powered by a custom FPGA. My, my! The washing up is going to take ages! On the sample rate front the Zen will run up to 192kHz – at this rate your ADAT total will be reduced to four in and four out, but your 20 channels of analogue input will still be 20 channels of analogue input. And more to the point your USB 2 pipe to and from the computer will still be 24 channels wide.

Controlling all this power requires a software interface and there are panels for Windows/OSX. Zen Studio also works with iOS devices; in this case only the front panel is used for control. At my Windows 7 Pro 64-bit install I had to reset my review model Zen back to absolute zero (ie, as it would be new out of the box) to get everything dandy. In record operation the Zen Studio was rock solid: three hours of 24-track 192kHz without a glitch and that on my rather tired old i5 2500K to a not much younger Samsung Spinpoint 1Tb. On my 2010 Core 2 Duo MacBook Air Reaper did 24 tracks of 96kHz at 24 bits without a problem, in fact 24 tracks at 192 also ran fine – this to an OWC 240Gb SSD drive.

Looking around for something to compare mic amp quality with I came up with the RME Micstasy, eight channels of very high-quality mic amps based on Burr-Brown PGA2500 digitally controlled mic preamps – the same chips used inside the Zen. I didn't have time for exhaustive testing but in a vocal shoot out using matched 414s it was, as you might expect, very close. A pretty good implementation then.

I just had time to swap in an Audio Developments AD066 which I'm very fond of. Maybe I preferred a slight leaner sound in the Audio Developments but to be honest I would be kidding myself if I thought I could AB them blind and pick out one or the other reliably. Finally I reached for my Mindprint DTC, again too close to call really – maybe the DTC edged it, but it could be nostalgia.

So the mic amps in the Antelope are very good. You get 65dB of gain and it's all useable, these are low noise mic amps even flat out.

The control panel has lots of features, one of the most obvious being a live reminder of software and firmware updates, and I applied both without difficulty. You can control some functionality from the front panel of the Zen. You have three buttons (note there is no power off switch – if you want to do that you need to pull the power plug – DC wall wart I'm afraid but at least the power connector is locking) and a rotary with visual feedback from a small but nicely readable colour screen. Your basic info screen has Sync Source, sample rate and levels for the three monitor outputs along with the jacks on the back and the two headphone outputs on the front. You can access mic gain of the 12 mic inputs (and here you get on board meters), the clock source, sample rate, and a couple of other system settings from the front panel but really the sheer number of features on the Zen means at the moment you really do need computer control.

Zero latency monitoring is available via the four onboard DSP mixers, which are independently routable to your monitors and headphones.

Talking of latency, the control panel offers several streaming options, from a minimum setting that gets you down to 64 samples to an extra safe streaming mode which is when you're recording for keeps and only have one hit.

The top section of the control panel allows you to see a bank of inputs at all times, preamps, line inputs, ADAT or SPDIF, which is great. My old tired eyes found the level metering could do with a little more contrast here as the meter bars are necessarily on the thin side.

Routing is drag and drop, anything to anything, nicely colour coded and works well.

Conclusion

I think it is fair to say that as a new product the Zen Studio has software that is perfectly functional but there is more to come and more to be done. [*A new enhanced version of the control panel based on customers comments wa sabout to be launched as we went to press - Ed*]. I found a metering anomaly on the preamp inputs at line level and I'm sure users are knocking on the Antelope door for interface tweaks (for instance something to make handling multiple channels in the mixer easier) and more DSP options. EQ and Dynamics are a good start, though I think the compressor could be easier to use. Reverb I understand is coming soon and delay would also be nice as would MS processing and, well, all the usual DSP stuff.

I've managed to get to the end of the review without dwelling on two of the most controversial aspects of the Zen – it has no rack ears, and worse in some people's eyes, it has a handle at one end and the ADAT connectors at the other. If you read the forums you'll find a few rothers, being much the same people who obsess over whether the mic amps sound like Neve or APIs. To be honest I could handle it, but then I wasn't racking it. Antelope says this is a box to go on the move with, hence the handle. It is also shipping a custom rack mounting kit that allows racking of the device for £59. A protective case is also available.

In summary I think the Antelope is a brilliant box – huge analogue connectivity and USB bandwidth and sounds great, with quality mic amps and convertors. On top of this foundation FPGA inside means serious room to grow as far as DSP is concerned. I love it. I think I will hang some cables through that handle, just for the hell of it. ■

INFORMATION

Feature Set

- Comprehensive mic pres, HiZ instrument and line inputs
- Parallel DSP and effects processing
- Battle-tested zero-latency USB audio interface
- Flexible routing and mixing capabilities
- RRP: £1,595

www.antelopeaudio.com

Fostex PX-6

PROFESSIONAL STUDIO MONITORS

Rob Tavaglione takes the latest addition to Fostex's PX family on the road and finds they perform well in challenging settings.

I remember when 'personal monitor' meant an Auratone or Fostex 6301 – the latter, an indestructible little broadcast audio workhorse. Today, there are mini-monitors everywhere and Fostex has added two such models in its PX line, serving needs at the intersection of broadcast and home studio applications.

Features

The PX-6 employs a bass-reflex design; 6.5in resin-impregnated aramid, fibre-stiffened woofer; a 1in resin-impregnated urethane, film-laminated polyester dome tweeter; 50W and 28W of power to woofer and tweeter, respectively; combo XLR/TRS and RCA inputs; a single rotary pot that switches to control both level and tone; DSP-controlled crossover at 2kHz; 20Hz-20kHz frequency response +/-2dB); signal fade-up at power-on; and a low energy consumption mode.

In Use

Upon first inspection, the PX-6 struck me as a thoroughly modern monitor, with its combo input, ingenious four-function rotary encoder (Volume and Trim offer combined 440-step resolution, while Treble adjusts HF output and Bass adjusts LF rolloff, all of which can be saved) and cabinetry, design, and finish. Upon first listen, they seemed natural and subdued, rather than bright and forward (like many modern small monitors). Accurately setting the parameters took some time – thanks to back-panel controls – but I eventually settled on a +2dB top end boost to achieve my own taste in balance. I stuck with this setting even after considerable use.

As I tried mixing and mastering with the PX-6s, it quickly became clear that they weren't going to give me the equitable combination of flat response, detail, and translatability I required for precise music work. They did impress me as sufficiently full, even if perhaps lacking some note definition in the low end; nicely matched and even with stable imaging; amply loud and strikingly attractive (that red-eye tweeter looks cool, very HAL from *2001: A Space Odyssey*).

Wouldn't you know it: during this evaluation period, I got two big location-recording jobs and I hoped that the PX-6s would be ideal for some portable monitoring. The first gig provided the pressure of two world-class producers whom I idolise (no name dropping – confidentiality agreement) monitoring my on-location mixes; both of them were plenty satisfied with the PX-6's clarity, output level, and intelligibility. On the second gig, the PX-6s filled my makeshift control room with joyful gospel sound and held up like troupers under long hours, nearly 100% humidity, and the high heat of the South Carolina sandhills.

"The PX-6s filled my makeshift control room with joyful gospel sound and held up like troupers under long hours, nearly 100% humidity, and the high heat of the South Carolina sandhills."
Rob Tavaglione

To My Ears

If your audio work is in a production truck/on-location and you need a small monitor footprint with ample SPL and front panel ports (for tighter placement options), require a non-fatiguing full sound with the detail necessary to mix dialogue and professional durability (as I've grown to expect from Fostex monitors) and can't quite afford the Neumann KH 120 (my top pick in small, location-friendly monitors at $1,500 per pair) then I recommend giving the Fostex PX-6 a try. At $899 a pair, street, they're quite worthy for location and broadcast applications – a growing portion of my own work – even as they are rivaled by numerous competitors in the saturated "small studio monitor" marketplace. ■

The Reviewer

Rob Tavaglione has owned and operated Catalyst Recording in Charlotte, North Carolina since 1995. Rob has also dabbled in nearly all forms of pro-audio work including mixing live and taped TV broadcasts (winning two regional Emmy Awards); mixing concert and club sound. He is a regular contributor to *Pro Audio Review*. **www.prosoundnetwork.com**

INFORMATION

Feature Set
- 50W (LF)/28W (HF) digital amplifier
- 6.5in Crimson woofer
- 1in Urethane film laminated polyester fibre dome tweeter
- Digital Network Filter (FIR type) for dividing network
- RRP: $899 per pair

www.fostexinternational.com

Shining Light

Jonny Lattimer first came to prominence through his work with Ellie Goulding, co-writing two songs on her double platinum selling album Lights. He is also a musician and producer who has worked with artists including Nina Nesbitt, James Morrison, Ella Eyre and Sam Smith, and he recently set up his own project studio. Joanne Ruddock catches up with him after a busy year.

> "The most important things in my studio are quick and flexible creative tools and things that help me to get a good vocal."
> **Jonny Lattimer**

You're a songwriter, musician, and producer. Do you spend as much time as you would like on each?

In general yes, I think so. I like to work as an all-rounder and get into all the different elements that make up a finished track. My focus is definitely songwriting though – I'll never leave a song in a state where I feel there's something not quite right about it. But sometimes a bit of time pressure is a good thing whether it's writing or production.

You came to prominence following your work on Ellie Goulding's 2010 album Lights. How did that come about?

I went to see a gig Ellie did really early on. At the time I was playing in a couple of bands and someone had suggested to me that I might be good at writing with other artists, so I contacted her and asked if she wanted to get together and try something. It's pretty amazing that she said yes considering at the time I didn't really have any experience of co-writing.

As well as Ellie, your credit list includes Tom Odell, Ella Eyre, and Rebecca Ferguson. Who else would be on your list of people to work with?

I have a really broad music taste so the list would probably be pretty diverse. On the pop side it would be amazing to work with someone like Beyoncé as I think what she does is really creative while still being super pop. Some of my favourite artists tend to work only on their own, like James Blake or Laura Marling. But I'm lucky to get to work with a lot of artists who I'd be a fan of anyway.

Do any projects stay in your mind that were especially challenging. If so, in what way and how were the challenges overcome?

The challenging projects tend to be when the artist is really versatile and can do a number of different things stylistically, sometimes it can be hard to keep the songs together in a way that makes sense on an album. To counteract that I try to bring out as much of the artist's personality as I can so that each track is a real reflection of them. Between that, the production and the vocal things can normally tie together OK.

I understand you recently set up your own project studio. How did you find that process and run me through what kit you opted for?

I took a lot of advice on my studio setup as I came into music from the creative rather than the engineering side so I didn't have a lot of experience of testing different bits of gear. The most important things in my studio are quick and flexible creative tools and things that help me to get a good vocal, so I can come out of a writing session with something that may not be perfect but has a good atmosphere and vibe and a vocal that really sells the song.

I'm running Logic on a high-spec laptop so it's fast but portable as I often work out of other studios. I've recently got Native Instruments Komplete Kontrol, which is a perfect example of something that gives quick creative results. I also have a couple of other keyboards and guitars but I try to keep most of my sounds in the box to save on clutter and time. The instruments I do have run into a Motu Traveler interface, which is again reasonably portable. I have some Focal Solo 6BE monitors – these I did test against some other options and I found them best for me. I have a few different mics but I mostly use the Neumann TLM 49, and I'm running that into a Neve 1073dpa preamp.

Do you have one piece of kit you can't work without and/or one piece you'd love to own?

On the technical side I have found my Neve preamp has really made a difference to my vocals (as well as guitars). It's crucial to me to get a vocal on a song that can rival any recorded in another studio, that way the record label can use my vocal even if they want a different production and they don't lose the magic that hopefully has been captured straight after the writing process. In terms of what I'd like to own – I'm not currently using an outboard compressor for vocals and that may be something I look at getting next.

Who have you been working with recently?

I've been working with a lot of new artists recently. The last couple of singles I have had out are *Walk* by Kwabs and *Deckchairs On The Moon* by Bipolar Sunshine. I've also been working with Sinead Harnett, Aquilo, and Zak Abel who are all exciting artists for next year.

What's been your highlight of 2014 and what are your plans for 2015?

I have to say working with Kwabs this year has been a highlight. He has a fantastic voice that's able to stir up your emotions in a pretty rare way. I have more songs coming out with him next year as well as the artists I mentioned, but also we're having another baby in January so I may be spending some more time out of the studio! ■

New baby

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